

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

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- Anti-Friction Metal.**
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Vulcan Iron Works Co.
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Westrom So. Electric Mfg. Co.
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Thomson-Houston Electric Co.
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Duff Electric Light Co.
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W. H. Cole.
- Electrical Supplies.**
Southern Electrical Supply Co.
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Stokes & Parrish Mch. Co.
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(See Grinding and Polishing Machinery.)
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(See also Machinery.)
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Buckeye Engine Co.
Chandler & Taylor.
Castle Engine Works.
Frick Co.
Hewes & Phillips Iron Works.
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(See Woodworking Machinery.)
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(See also R. R. Equipment and Supplies.)
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Diamond Prospecting Co.
Wiswell Electric Mining Machinery Co.
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Rand Drill Co.
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- Punching and Shearing Mohry.**
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(See Mining Machinery.)
- Railroads.**
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Western Md. R. R.
Cin. Ham. & Dayton Rd.
E. Ten. Vir. & Georgia.
Railroad Equip't and Supplies.
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(See also Towns.)
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- Roofing.**
Cincinnati Corrugating Co.
Ehret-Warren Mfg. Co.
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Globe Iron Roofing and Corrugating Co.
Kanneberg Roofing Co.
Holtan Iron Roofing Co.
Cambridge Roofing Co.
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Lowe & Tucker.
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Waterbury Rubber Co.
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Wells Rustless Iron Co.
- Saws.**
(See also Woodworking Machinery.)
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Peter Gerlach & Co.
Henry Disston & Sons.
The Detroit Saw Wks.
Ely & Deming.
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Syracuse Tw. Drill Co.
Niles Tool Works.
W. F. & Jno. Barnes Co.
H. L. Shepard.
Pancoast & Maule.
Standard Tool Co.
- Saw Gummer.**
N. Y. Belt'g & Pack. Co.
- Saw Filer and Gummer.**
Sam'l. C. Rogers & Co.
- Saw Mill Machin'y**
Frick Co.
De Loach Mill Mfg. Co.
Richmond Mch. Wks.
A. C. Powell & Son.
Taylor Mfg. Co.
- Scales.**
Riehle Bros.
Standard Scale Co.
- Scroll Saws.**
H. L. Beach.
- Sheet Metal Working Machinery.**
E. W. Bliss Co.
Niagara Stamping and Tool Co.
Stiles & Parker Press Co.
- Shingle and Stave Machinery.**
(See Woodworking Machinery.)
- Skylights.**
E. Van Noorden & Co.
Valie & Young.
- Spikes.**
Richmond Standard Spike Co.
- Steamers.**
Bay Line Steamers.
Baltimore & Light Co.
- Steam Hammers.**
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Long & Allstatter Co.
Belden Machine Co.
Bradley & Co.
Southwark Found. and Machine Co.
Knoxville Car Whl. Co.
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Hughes Steam Pump Co.
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Valley Pump Co.
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The Smith & Valie Co.
Buffalo Stm. Pump Co.
The J. H. McGowan Co.
Rife's Hydraulic Engine Mfg. Co.
Rumsey & Co., (Ljm.)
Boggs & Clarke.
- Steam Separator.**
The Stratton Separ. Co.
- Steel Castings.**
Chester Steel Cast'g Co.
Thos. Devlin & Co.
- Steel Rails.**
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Penna. Steel Co.
- Tackle Blocks.**
Thos. Devlin & Co.
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Schaum & Uhlinger.
Coburn Shuttle Co.
James Smith & Co.
American Supply Co.
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Crompton Loom Wks.
Geo. Draper & Sons.
H. W. Butterworth & Son.
Globe Machine Wks.
W. A. Richardson & Co.
Whitinsville Spinning Ring Co.
The Green & Wood Mfg. Co.
Jeremiah Clark.
Easton & Burnham.
Chas. Hesp.
J. A. V. Smith.
Eastwood & Co.
- Textile Machin'y**
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L. Godfrey & Co.
- Towns.**
Marion, N. C.
Sumter, S. C.
Charlottesville, Va.
Anniston, Ala.
Bessemer, Ala.
Florence, Ala.
New Decatur, Ala.
Sheffield, Ala.
Morristown, Tenn.
Fort Payne, Ala.
Denton, Tex.
Bluffton, Ala.
Wilmington, N. C.
Liberty, Va.
Oxford, N. C.
Middleborough, Ky.
Huntington, Ark.
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- Trucks.**
Standard Scale Co.
- Turnbuckles.**
Ely & Deming.
- Valves.**
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E. Van Noorden & Co.
- Water Closet.**
Haines, Jones & Cadbury Co.
- Water, Wheels.**
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Rome Fdy. & Mch. Wks.
Stillwell Bierce Mfg. Co.
Lancaster Turbine Wheel Co.
S. Morgan Smith.
- Well Tools.**
St. Louis Vise & Artesian Well Co.
F. C. Austin Mfg. Co.
- Well Points.**
R. R. Rouse.
- Wheelbarrows.**
Kilbourn & Jacobs Mfg. Co.
Stuebner & Woods.
- Wire, Wire Rope, Barbed Wire, &c.**
Washburn & Moen Mfg. Co.
Williamap't W. Rope Co.
Ludlow Saylor Wire Co.
- Wire Goods.**
Fred. J. Meyers Mfg. Co.
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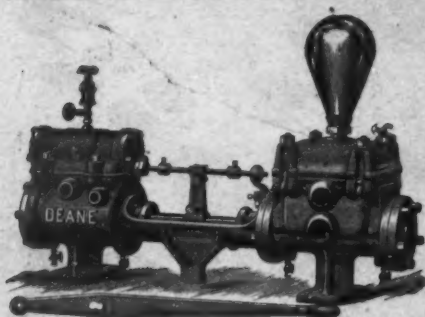
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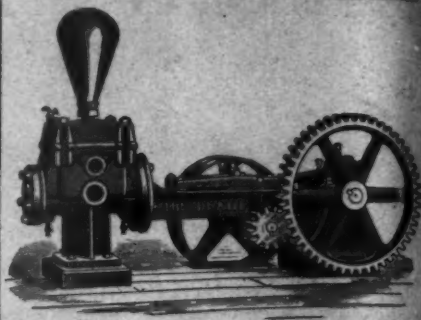
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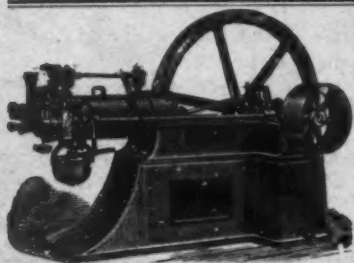
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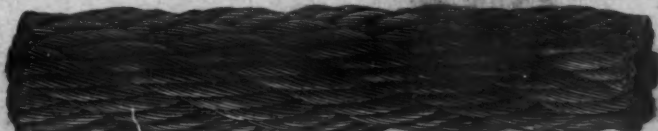
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WEEKLY.

BALTIMORE, JANUARY 11, 1890.

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Manufacturers' Record.

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BALTIMORE, JANUARY 11, 1890.

THE Springfield (Mass.) Union says: "The color prejudice of the South is very absurd—it is incomprehensible." The editor of the Union declined to employ a capable and bright reporter some months ago because he was a Catholic. The religious prejudice of the North is very absurd—it is incomprehensible.

THE spirit of good fellowship so gracefully established by the late H. W. Grady between Atlanta and Boston is to be further fostered. The Atlanta Chamber of Commerce holds its annual banquet February 13th, and has invited the Merchants' Association, of Boston, to be represented, and the president and several members of the association have accepted the invitation.

AN inconsistency in our political institutions is well shown by the appeal of the hemp producers of Kentucky. Their State is the center of the free trade element, which opposes all protection, and yet they send a strong petition to Congress to retain the tariff on hemp, and ask that all foreign fibres be kept off the free list.

The report of the United States Agricultural Department, giving the yield of grain for 1889, shows that the South produced of—

	Bush.
Corn.....	519,517,000
Wheat.....	55,060,000
Oats.....	77,714,000

Total..... 652,291,000
" in 1879..... 431,074,630

Thus in ten years the South has increased its grain production over 220,000,000 bushels.

Two Sides of the Story.

The North American Review this month favors its readers with two papers of profound interest—one by Mr. Gladstone, the most eminent of living British statesmen; the other by Secretary Blaine. The first is an argument for free trade; the second is a reply that completely exposes the fallacies and unsound theories of the distinguished ex-Premier. Mr. Blaine goes to the heart of his subject in his opening paragraphs by saying:

Our foreign commerce, very large in itself, is only as 1 to 25 compared to our internal trade, and yet Mr. Gladstone thinks that any policy which is essential to an island in the Northern ocean should be adopted as the policy of a country which, even in his own vision, is a world within itself.

With these fundamental points of difference between the two countries I assume that varied financial and industrial systems wrought by the experience of both would be the natural logical result. Hence I do not join issue with Mr. Gladstone on both of his propositions. He defends free trade in Great Britain; he assails protection in the United States. The first proposition I neither deny nor affirm.

The chief trouble with all American free-trade advocates is that they have studied English text-books and adopted English theories without taking into account the relative conditions and necessities of the two nations. In a sentence Mr. Blaine makes the contrast between "an island in the Northern ocean" and this country, which "is a world within itself." If free trade is the natural logical result of England's financial and industrial system, that is one thing, but the experience of this country does not lead to the same conclusion. On the contrary we know that—

During this long period, 1812 to 1861, free trade tariffs were thrice followed by industrial stagnation, by financial embarrassment, by distress among all classes dependent for subsistence upon their own labor. Thrice were these burdens removed by the enactment of a protective tariff. Thrice the protective tariff promptly led to industrial activity, to financial ease, to prosperity among the people. And this happy condition lasted in each case with no diminution of its beneficent influence

until illegitimate political combinations, having their origin in personal and sectional aims, precipitated another era of free trade.

American history abounds with illustrations of the ability of the people of the United States to solve all problems and overcome all difficulties that confront them, and that without foreign aid or advice. It is only in considering economic questions that they have ever listened to foreign instructors, and in the three eras during which they put in practice what they learned they suffered such serious losses that they will never again try the experiment.

ON New Year's Day the Washington Post entered upon the second year of its career under its new management, and celebrated the event by publishing a finely printed and beautifully illustrated four-page sheet entitled "The Three Americas Exposition, Washington, D. C." The first page of this New Year's souvenir is occupied with a cartoon depicting Columbus planting on the soil of the New World the flag of Aragon and Castile. Behind him is the ocean, with one of his galleys at anchor. Above and on either side are allegorical figures representing all the nations of North and South America. Beneath him rises the dome of the Capitol. The design is unique and suggestive, but the artist, whoever he was, ought to have had a better sense of the beautiful, and have given finer features to the various faces of this representative group. The remaining three pages contain a compact history of the origin, rise and progress of the movement that seems now certain to make Washington the place at which the Three Americas Exposition of 1892 will be held. These are profusely illustrated with pictures of the public buildings and grounds, and particularly with a bird's-eye view of the national capital, including in the foreground the admirable site of the proposed exposition. The Washington Post is deserving of all commendation for this elaborate and timely publication, which in its way is an irrefutable

argument in favor of selecting the nation's capital for the great historic celebration.

The Iron and Steel Works of the United States.

The tenth edition of the directory to all the iron and steel working establishments in the United States, corrected to November, 1889, is at hand. It is compiled and published under the patronage of the American Iron & Steel Association by Mr. J. M. Swank, who deserves great credit for the thoroughness and completeness of his work. The table of contents includes blast furnaces arranged by States, furnaces abandoned or likely to be long inactive, rolling mills and steel works, abandoned rolling mills, abandoned steel works, forges, bloomaries, abandoned forges and bloomaries, special lists of manufacturers, indexes, addenda. The South makes a splendid showing in its development of iron industries. "The greatest activity in the American iron trade during the past two years," says Mr. Swank, "has been chiefly noticeable in the erection of blast furnaces in the Southern States, and in the erection of steel works in the Northern States." Alabama leads all the States in the number of new furnaces built, and most of the new furnaces now building are in the South, a most significant fact in relation to iron making. The blast furnace capacity of the country is now 13,168,233 net tons a year, an increase of 2,177,240 net tons since November, 1887. These two years have shown a large increase in aggregate capacity and average capacity. In 1887 the average capacity was 363 net tons per week, while now it is 440 net tons. These figures indicate what great progress iron making has made in this country during the past two years. No new Bessemer steel plants are now in course of erection, though there was a large increase between 1887 and 1889 and others are projected. But in open hearth steel there has not only been a large increase during the past two years, but

many new furnaces are now building. These furnaces are all of large size and capacity. In this branch of steel making the South is preparing to make rapid strides.

This book is a mine of valuable information and should be in the hands of every manufacturer of iron. It can be had, post-paid, for three dollars, upon application to the office of the Association at 261 South Fourth street, Philadelphia, Pa.

The Manufacturers' Record.

[From Bessemer (Ala.) Weekly.]

A superb and dominant factor in the development of the South is the MANUFACTURERS' RECORD, of Baltimore. We do not know that promoting and conserving the interests of the South was the original idea of its institution*, but we do know that from the first of our acquaintance with it it has most zealously and effectively devoted its columns to this end. Its enterprise in the exposition and elucidation of Southern resources and progress is simply without limit.

Not only does it utilize a valuable and far-reaching system of the most intelligent local correspondence in obtaining its facts, but some of the ablest journalists of the country attached to its staff regularly and constantly visit the different sections, and keep its readers thoroughly informed on all commercial and industrial movements. The MANUFACTURERS' RECORD has gone beyond this in its mission, and has had for months past a scientific commission of expert mineralogists, geologists and surveyors making a careful examination and survey of the mineral resources of the mineral section of the South.

Among the many special instances of its great enterprise was the Special Bankers' Edition of the 21st of December. It presented an epitome of the South's redemption—its commercial, industrial, mineralogical and financial history and progress since the war, and a resume of its grand promises and legitimate possibilities.

To bankers it seems to us this edition is invaluable. Its "Ten Years of Banking" is a most complete and painstaking condensation of the most valuable information.

To every person interested in Southern development, to every intelligent business man in the South, it seems to us as if the MANUFACTURERS' RECORD is invaluable.

*The very first issue of the MANUFACTURERS' RECORD announced that there was "an actual need for a paper which would adequately represent the manufacturing interests and keep abreast of the rapid improvement in the material affairs of the South," and that the MANUFACTURERS' RECORD will be the "representative industrial paper of the New South and devoted solely to the industrial development of this section." The Bessemer Weekly will find in this extract the "original idea of the institution" of the MANUFACTURERS' RECORD, and to that one idea it has sought to bend every energy. In the prosecution of this work the MANUFACTURERS' RECORD has steadily and unceasingly labored, and from the day when its first issue gave the reason for its existence it has never changed in policy or management. That its work for the South has been productive of good results, and that the press and the people of this section appreciate the fact that it is "of the South, for the South, and by the South," is more than gratifying.—[Ed. MANUFACTURERS' RECORD.]

The South and Competition.

A Boston reporter has been amusing himself by asking the managers of leading cotton mills of New England whether they think there is any likelihood that the South will ever become a formidable competitor of the North in this line of manufacture. Most of the treasurers declined to make any statement, but a few of them were quite talkative. One man, who confessed that he did not know anything about the South's capabilities in this line, thought the competition "would never be of sufficient volume to affect the wealthier corporations of the North." Another thought New England invincible "on account of nearness to the shops that manufacture cotton machinery," but nearness to the cotton fields he regarded of little economic importance, "although Southern mills can turn out just as good cotton of coarse grade as our mills North." Continuing, he said: "Wherever a mill is located in the South, it would naturally take cotton from sources in the immediate vicinity in order to make the most of such advantage, but the locality of staple cotton changes very often, and some years cotton near at hand would not be of the required quality, and staple cotton at a distance would have to be ordered." Still another agent innocently mentions the fact that he has noticed this competition of the South, when goods were selling low and Northern mills were holding their stocks, while the Southern mills "were compelled to sell at any price owing to the lack of means for carrying their stock. At such times I have seen Southern goods in Boston markets, and they fixed the prices for Northern goods."

Such reasons as these for saying that the South will never be a competitor in cotton manufacturing are senseless from every point of view. History tells us that New England did not first manufacture cotton machinery, then afterwards cotton, but, on the contrary, fitted her mills with English made machinery and afterwards undertook the manufacture of machinery. "History repeats itself." The South has the manufacturing of cotton firmly established, and is now undertaking the manufacture of machinery. As yet this is on a small scale, but with cheap and high-grade iron and the increasing skill of her mechanics, the South will be sending cotton machinery to New England before another quarter of a century rolls around. The best cotton mills in the South have attached to them machine shops, perhaps not for the making of machinery, but for repairing it, and the writer has seen such shops attached to medium-sized mills in the South that would do credit to the largest corporations in the North. With such shops as these, mills in the South have an advantage over mills in the North where machinery is made, even when

"the locality of staple cotton does change."

A most frequent charge brought against Southern industries is that they do not have capital enough to work with. This is true. Another charge is that the South unloads its products upon the Northern markets during periods of depression. This also is true. In times of depression profits are of necessity very close. And yet at such times the South can send iron to Pennsylvania and sell it, and cotton cloth to Massachusetts and sell it. Without large capital to fall back upon, how can the South afford to pay transportation at such times, unless she has advantages that Pennsylvania and Massachusetts do not have? Certainly without capital she cannot afford to manufacture at a loss for the mere pleasure of selling goods in the markets of the North.

In wood-working the South competes easily with the North and West, in spite of the fact that there is not an establishment in the South that manufactures wood-working machinery. In iron making the South competes with the world, yet all the materials for building blast furnaces have come from Pennsylvania or adjoining States. Why, then, cannot the same be done in cotton manufacturing? We believe it can be and will be.

A TRAVELLING salesman of a leading New England machinery house in a letter to the MANUFACTURERS' RECORD says:

I find the MANUFACTURERS' RECORD has by far the largest circulation of any mechanical and industrial paper in the South, and is universally well spoken of by mill men and others. I find it in the reading rooms of principal hotels and in a large majority of manufacturing establishments. The great trouble about it is that in the hotels especially the "machinery wanted" sheet is cut out by the fellow that sees the paper first and carried off. This speaks well for the MANUFACTURERS' RECORD, but is bad for the fellow that comes too late.

The Shrewd New South.

The Baltimore MANUFACTURERS' RECORD, which, by its intelligent and persistent work, has done so much to build up the industrial interests of the New South, has made a summary of the enterprises organized in the South during the last four years. From these authentic figures it appears that since January 1, 1886, there have been 101 gas works companies started in the South and 475 electric-light companies. This shows a remarkable preference for electricity, yet one that might be expected where newer communities have the opportunity of choice. The result is that many Southern towns and cities enjoy an illumination of streets and homes not to be matched in the East. The statistics of our progressive contemporary do not bring out the fact, but it is not the less true that the South has been as kindly disposed toward electric railways as to electric lighting, and that it has helped give the new industry its rapid development.—N. Y. Electrical World.

THE Special Bankers' Edition of the MANUFACTURERS' RECORD is an interesting paper, and reflects great credit upon the management. It is different from anything ever attempted before in American journalism.—Franklin (N. C.) Press.

BESSEMER ORES.

WHAT THE CAROLINAS CAN SHOW.

Historical Iron Works at
Blacksburg, S. C.

ANALYSES OF HIGH-GRADE ORES.

HEADQUARTERS
MANUFACTURERS' RECORD'S
EXPLORING EXPEDITION,
IN THE NORTH CAROLINA MOUNTAINS,
January 5, 1890.

I think it more than probable that the day may come when the development of the basic steel process will rob the strictly Bessemer ores of some of the great advantage they now possess over phosphorus ores, but the time has not arrived, and it is not likely that the day ever will dawn on which the discovery or development of a deposit of iron ore, high in metallic iron and low in phosphorus will not excite attention and interest in the world of iron and steel. It is a matter of importance to the fortunate region of the occurrence, and to the whole country that the Bessemer ore regions of Eastern Kentucky and North Carolina, occupy the geographical relations they do to the great coking coal fields of Kentucky and Virginia. The distance between these rich resources is not over one hundred miles, the intermediate territory including important deposits of hematite, red fossiliferous, brown and limonite ores.

The quest for strictly Bessemer ores in the South has been unceasing for years. Birmingham capitalists and experts have scratched the mountains of Alabama assiduously for the rich minerals, and a hundred times have thought they had it. Several years ago when contributing Alabama matter to the pages of the MANUFACTURERS' RECORD, I used to start out on the hunt at every report of a find, only to be disappointed. There are any number of encouraging signs and fine specimens of magnetic and specular ore may be picked up in a variety of places, but, so far, the expected deposits have not materialized. It is not certain that future investigations may not uncover some valuable deposits of magnetite in Eastern Alabama, but the record of experience thus far is not encouraging to that end. Like disappointment has attended efforts to find tin in Alabama. Along the Red Mountain in several counties very promising "float" has been found, and the late Professor Gessner even insisted that he had found the vein. I have myself seen a beautiful specimen of the mineral of tin (cassiterite) as large as John L. Sullivan's fist and as black as jet, picked up on the mountain about 60 miles south of Birmingham. The crystallization was perfect, the facets of the crystals being as sharp as if the piece has been but yesterday broken from the parent formation, and this particular sample assayed 85 per cent. of metallic tin. Alabama may some day show up a big vein of this desirable metal, just as magnetite may be found, by and by, in massive formation.

With all the exploiting that has been going on the discovery of real, reliable, massive deposits of Bessemer ores have been confined to the district of which Cranberry is a part, at least until lately, and recent discoveries have been largely in the shape of extensions to hitherto supposed limits of that same field. As observed in the paper preceding this the mountains carrying Bessemer ore deposits succeed each other ridge after ridge from Carnegie down into South Carolina, in which State, at and near Blacksburg, there is a variety of ore production of especial interest to geologists and iron men. The ore occurs in a sort of talcose schist, a

brown and black streaky article, which needs no description at all to people familiar with the peculiar product of the Tillie Foster mine in New York State, because as far as my memory serves they are identical in structure and appearance. Whether this Southern relative of the New York spinster is a true Bessemer or not will be indicated by the analyses given below. I offer a lot of them because if what appears on the surface of the matter be true these Blackburg deposits are of more than local importance, owing to the ease and economy with which it is asserted these ores can be concentrated, and the concentrates sent East via Charleston and the sea:

ANALYSES OF ORES FROM BLACKSBURG, S. C.

By J. H. PRATT, Chemist, Birmingham, Ala.
Two samples—No. 1 from "No. 4," and No. 2 washed ore from "No. 2" mine.

	No. 1. Per cent.	No. 2. Per cent.
Peroxide of iron.....	46.077	65.117
Peroxide of iron.....	22.664	26.029
Peroxide of manganese.....	1.013	1.131
Lime.....	0.192	0.152
Magnesia.....	14.809	3.150
Alumina.....	0.663	0.730
Phosphorus.....	0.014	0.0068
Titanium.....	0.142	0.392
Sulphuric acid.....	trace	trace
Sulphur.....	trace	trace
Silicic acid (combined).....	8.623	1.550
Silica (free).....	4.883	1.371
Water.....	0.330	0.139
	99.409	99.978
	49.882	65.827

By SALOM & WESTESSON, Chemists,
Philadelphia, Pa., Jan. 18, 1889.

Sample from Mine No. 2.

	Per ct.	Equivalent to	Per ct.
Magnetic oxide.....	85.43	Metallic iron.....	61.86
Phosphoric acid.....	0.099	Phosphorus.....	0.026
Peroxide mang'e.....	0.25	Manganese.....	0.16
Sulphur.....	0.008		
Silica.....	5.82		
Alumina.....	5.03		
Lime.....	a trace		
Magnesia.....	0.373		
Titanic acid.....	none		
Loss on ignition.....	.231		

Volume 15, Tenth Census Report, page 319, gives partial analysis of Plantation Bank, (No. 4 soft) and same from Brockley, west end of range, as follows:

	Bank, per ct.	Brockley, Per cent.
Iron.....	54.65	58.34
Phosphorus.....	0.002	0.011
Phos. in 100 parts iron.....	0.004	0.019

The following analyses by N. P. Pratt, chemist, Atlanta, Ga.: 1. Hard ore from "No. 2;" 2. Average sample of 100 tons hard ore from "No. 2;" 3. Sample of washed ore from "No. 4;" 4. Average sample of hard ore from "No. 4."

	No. 1. Per ct.	No. 2. Per ct.	No. 3. Per ct.	No. 4. Per ct.
Specific gravity.....	4.755			
Silica & insol. mat.....	6.42	18.57	6.47	14.90
Phosphorus.....	0.0068	0.029	trace	trace
Metallic iron.....	58.87	51.66	59.99	48.36
Sulphur.....		none		
Titanic acid.....		none		

The following analysis furnished by Mr. H. M. Curry, manager Carnegie Bros. & Co., Pittsburgh, Pa., March 27, 1889:

Sample Hard Ore No. 2.

	Per cent.
Silica.....	10.675
Iron.....	54.100
Phosphorus.....	0.028

By the same, concentrates, reduced by H. Bradford, Philadelphia, May 13, 1889:

No. 2 Hard Ore Concentrated.

	Per cent.
Silica.....	4.65
Iron.....	62.540
Phosphorus.....	0.015

No. 2 Ditch Ore Concentrated.

	Per cent.
Silica.....	2.45
Iron.....	67.184
Phosphorus.....	0.003

No. 4 Soft Ore Concentrated.

	Per cent.
Silica.....	2.60
Iron.....	66.245
Phosphorus.....	0.009

Little as South Carolina has done in the iron line during the present century, the colony was quite a forward quantity in the infant industry in the pre-revolutionary days. This same Blackburg ore was the basis upon which a venerable old forge was operated in those bygone times, until one day that English Custer, Colonel Guy Tarleton with his fierce dragoons came along and knocked the plant into smithereens. Not long ago General Wilder was poking around the ancient furnace site, when he saw the end of a pig sticking out of the bank above the water course that used to furnish the blowing power to the concern. He secured a piece of it which I had the pleasure of inspecting. Weather worn by the succeeding seasons of more than a century and a quarter, it still asserts itself as a pretty fair average every day American pig, and I shouldn't be surprised if analysis were to show it low enough in phosphorus to be classed as Bessemer, and,

therefore in its day fit for ultimate conversion into swords and razors for the fathers of the Constitution. When one gets down this way he cannot help feeling that he is treading historical ground. The old people still retain a traditional contempt for "Hessians," and the memory of the active Tarleton is not held in loving remembrance.

We are "excuting" off into South Carolina when we are supposed to be doing the mountains of North Carolina; but geology doesn't concern itself with arbitrary political boundaries, and that great iron field whose principal territory is indeed in North Carolina, stretches up into Tennessee and down into South Carolina with an absolutely calm indifference to State boundaries.

Nobody in the South is perhaps better acquainted with the local geology and resources of the Cranberry district than General J. T. Wilder. I quote from a recent description of the deposit written by him. The General observes that the Cranberry ore "is found in a great vein running east and west through the counties of Carter in East Tennessee, and Mitchell in North Carolina, some 28 miles in length, and crossing the State line between those States and skirting the northern base of Roan Mountain, one of the highest summits of the Appalachians, being 6,397 feet above sea level. The ore exists in great quantities, being some 300 feet thick at its Eastern end and tapering to about 12 feet thick at its Western extremity. This great vein stands on edge, extending down to an unknown depth, 'pitching' to the South at an angle of about 60 degrees, and follows an irregular line of foot hills which skirt the north side of Roan Mountain, and 'crops' out on the summit of these hills, which vary from 300 to 500 feet in height. It is also laid bare in the valleys of the numerous streams which run down from the side of the High Roan Mountain and cut deeply through the iron ridge at its base. The ore is a magnetic black oxide, yielding in the furnace about 50 per cent. of metallic iron of excellent quality for making steel. It carries a part of its own flux and works easily and rapidly in the blast furnace." Samples taken from the stockhouse of the Crozier Furnace at Roanoke, Va., and analyzed by the Chemist of the Chester Rolling Mills at Chester, Pa., give:

Insoluble residue or silica.....	20.16
Peroxide manganese.....	0.46
Phosphoric acid.....	0.018
Sulphur.....	0.043
Alumina.....	0.77
Lime.....	8.92
Magnesia.....	2.53
Carbonic acid, water and loss ..	0.60
Magnetic oxide of iron.....	62.51
Metallic iron.....	49.27
Phosphorus.....	0.0068

General Wilder remarks that these samples were taken before the mines were fully opened, and that, on that account the ores contained considerable percentages of extraneous silicious matter on the surface. The company operating the Cranberry mines is reported to have a large line of orders constantly ahead of current production. The South Tredgar Nail Works of Chattanooga have been reducing the ores in a Bessemer converter, for their purposes with, reported, excellent results. Sections of the Cranberry bed have been bought by the de Bardeleben Company of Birmingham, and by the Citico Furnace Co., and Roane Iron Co. of Chattanooga. Following are a number of analyses of Cranberry ores, the first four of which are by Dr. Genth (see Kerr's Report.)

	64.	65.	66.	67.	68.
Magnetic Oxide of.....	94.37	91.45	85.99	80.77	91.89
Oxide of Mangan'e.....	0.26	6.06	0.24	1.42	0.32
Alumina.....	0.43	0.77	0.11	0.52	1.01
Lime.....	0.43	1.01	0.72		1.06
Magnesia.....	0.36	0.53	0.33		0.23
Water.....		0.44	1.53	8.21	1.15
Silica, Pyroxene, etc.....	4.16	5.74	11.48	9.08	4.02
Sulphur.....					0.25
Phosphoric Acid.....					trace
	100.00	100.00	100.00	100.00	100.00
Metallic Iron.....	68.34	66.22	61.98	58.49	66.53

Professor Chandler, of Columbia College, New York, who analyzed No. 68, stated: "This is the best iron ore I have

ever analyzed. It is very rich in iron and very free from sulphur and phosphorus." For many years the smiths and farmers of the country side have been using iron made from Cranberry ores and will not use any other if they can obtain it. Cranberry iron is remarkably soft and tough, while as to tensile strength it takes advanced rank, as the tests of the U. S. Ordnance Department indicate. Blooms made at the old Cranberry forges have been largely used in Baltimore in former years for boiler iron, commanding a price much above the ordinary market.

Before we leave the subject, it is as well to make an industrial note concerning the portion of Northeast Tennessee bordering on the magnetic ore region. It may very reasonably be supposed by general readers that the neck of woods in question is only interesting on account of its relations to the rich mineral belt whose Alpine matrix is always in sight from town or village. Should the stranger stop at Greenville, Jonesborough, Johnson City or any such places, with that idea in his head, he will at once begin to wonder what can give these mountain communities the air of thrift and prosperity that appears palpably on every side. It cannot be entirely referred to mineral interests of the district, for the reason that those interests are yet in their swaddling clothes. I did not understand the puzzle myself until upon enquiry I discovered that the good genius of the region is Tobacco. Within the past five years it has been demonstrated that the limestone soils of the valleys and hill-sides hereabouts are eminently fitted for the production of the finest grade of bright golden, silky leafed tobacco ever grown in America. Now everybody is at it. I came across one farmer who had just received eight hundred dollars for, I think, six tierces of the pleasant leaf grown on not over two acres of mountain land. Farm lands worth from \$5 to \$10 per acre three years ago I am told now command from \$30 to \$50 and are eagerly snapped up at that, because in desirable locations the value of an acre is more than covered by a single crop. The really golden product sells for from \$1.10 to \$1.25 per pound, and the country is full of buyers for Northern, Eastern and Southern houses, many of which have large warehouses at Greenville and other points. This comparatively new crop is bringing money, enterprise and comfort into the neighborhood. It is building banks and establishing mercantile concerns for traffic in a higher grade of merchandise than was formerly demanded by the inhabitants. It is resurrecting towns like Greenville, painting houses, mending fences and increasing the average consumption of new collars and coats. It is enriching the district in such manner as that the people thereof will have means wherewith to take advantage of the impending development of mining and manufacturing industry to their own advantage in many ways. Verily, among the blessed things of this life; productive of enterprise and profitable agriculture, wealth compelling, slightly narcotic, gently sedative, germ destroying, mildly tonic and laxative; the rich man's luxury and the poor man's solace—Tobacco, with a big, big T, is the one for our money.

GOLDSMITH BERNARD WEST.

THE Special Bankers' Edition of the Baltimore MANUFACTURERS' RECORD, issued last week, was not only a gem of typographical art, but a most valuable publication, containing a vast amount of interesting information touching the matter of Southern progress. One thing which gives special value to the contents of this publication is the care used to secure accuracy in all of its statements. Every business man, North and South, ought to subscribe for the MANUFACTURERS' RECORD.—Nashville (N. C.) Argonaut.

YELLOW PINE LANDS.

A Claim That They Will Be Very Greatly Reduced in the Next Six Years.

NEW ORLEANS, LA., Dec. 31, 1889.

Editor MANUFACTURERS' RECORD:

On January 5th, 1889, just 12 months ago, the MANUFACTURERS' RECORD published a statistical and prophetic statement from me bearing upon the yellow pine stumpage in the South. I ask the readers of the MANUFACTURERS' RECORD to kindly refer to that issue.

What are the facts and conditions of the supply of yellow pine stumpage to-day? This is no idle question—no boomerang effort to give a bulge to values. It is a serious and momentous question—one fraught with grave apprehensions. I will not elaborate on this subject, but simply refer to the enormous production of yellow pine lumber, the increase in our population and their ever increasing wants; to the tremendous waste and destruction of our timber following behind the march of the homesteader; to the rapid depletion of forests and the wasteful destruction by the turpentine and rosin-making processes of the day. These are a few powerful factors calculated to make a man of thought stand in awe at the rapid and certain destruction of our pine forests. To-morrow statistics will show that we have 12,000,000 more population than 10 years ago. How many, many millions more have grown the uses and demand for lumber and timber?

I have for ten months been engaged in an earnest, careful and thorough investigation of the yellow pine stumpage available in the South. I have encompassed Florida's vast pine domains and realized the vagaries and visions set forth as to her wonderful pine timber resources. They are wrong and the timber is partly unavailable. I have searched the Carolinas and Georgia, taken in their vast territory of "boxed and sapped" pineries. The figures set forth by the statistician are all wrong. I have travelled throughout the length and breadth of Alabama and Mississippi, estimated their pines. I have taken Louisiana by parishes, and Texas by counties; Arkansas by facts as given by her State official records. I have made all and proper allowance for Missouri, West Virginia and Old Virginia, Delaware and Maryland, and to all of my most convincing and conservative figures of standing stumpage I have added a large percentage of increase to provide for oversights and inaccuracies, and from this grand and liberal total I have deducted the production of the mills, making limited allowance for the destructions and waste by storm, fire and clearing for the homestead, and I realize that within six years yellow pine stumpage will command by the thousand feet the prices prevailing to-day by the acre.

There are ahead some wonderful revelations in the matter of supply, and so sure as night follows day they will reveal the fact of an immense shortage. Now with the departing old year, I write a timely word of warning to the readers of the MANUFACTURERS' RECORD, which is trite and brief—"pin your faith to and put your dollars into yellow pine timber lands."

W. H. HOWCOTT.

AMERICAN push is beginning to be not only appreciated but feared in Europe. It has been proposed to hold a World's Electrical Exposition in Frankfurt in June next, to be continued for five months. Herr Siemens, Germany's foremost electrician, warns his fellow-countrymen that Germany cannot now compete with America in the number of new electrical inventions, and advises that the exhibition be postponed eighteen months, until the disparity becomes less startling.

THE NEW TOWN OF PIEDMONT,

In the Heart of Alabama's Brown Ore Region.

[Written by a Staff Correspondent of the MANUFACTURERS' RECORD.]

The first great event of this new year of grace in Alabama was the founding of a new town at the right place, by the right men, in the right way. So wisely and well had the preliminary work been done, and so strong was public confidence in the future of the place that all previous town-opening records were broken by the time the sun went down on this, the fourth day of the new year, behind one of the many mineral mountains that furnish the foundation for Piedmont's prosperity. In the forenoon the company was organized, and within three hours from the moment the big white town-plat was unrolled, a hundred and fifty thousand dollars' worth of lots had been sold outright and a good many more engaged to be paid for early Monday morning. And what is equally as significant as such heavy buying is the fact that the purchasers of this Piedmont property were for the most part men of large means who bought not for speculation but for safe investment—men who realized in the twinkling of an eye that Piedmont had not only been started by the right men, at the right place and in the right way, but that there would be no stop in its progress until Alabama has passed Pennsylvania in the race for industrial supremacy.

The men who will make the city of Piedmont are well-known alike in industrial and financial circles, at the North and in the South. The president of the Piedmont Land & Improvement Company is Mr. Preston Lea, of Wilmington, Delaware, where he is president of the Union National Bank and a large mill owner. The vice-president is Mr. Wm. G. Ledbetter, of that signally successful Anniston corporation known as the Ledbetter & Co. Land & Loan Association. The other directors are James Swann, of the great New York firm of Inman, Swann & Co.; J. E. Smith and S. R. Smith and E. H. Gayley, capitalists of Wilmington, Delaware; J. M. Ledbetter, J. H. Ledbetter and B. F. Johnson, of Anniston.

The stock of the company is one million two hundred and fifty thousand dollars all subscribed prior to the organization and all full paid and non-assessable. The following is a complete list of the stockholders other than those already mentioned as directors: George O. Vanderbilt, capitalist, of Trenton, N. J.; Tilgman Johnston, of Wilmington, Del.; Heald & Co., bankers, of Wilmington, Del.; Willard Saulsbury, Jr., of Wilmington, Del., and General J. H. Wilson and A. H. Smith of the same city; John C. Calhoun, of New York, who is one of the directors in the Richmond & Danville Railroad, which will soon be much more closely connected with Piedmont than at present; George D. Harris, of Oxford, Alabama; W. W. Draper, the wholesale shoe merchant of Atlanta, Ga.; C. P. Ball, who is now receiver of the East & West Railroad of Alabama, and R. D. Crusoe, of Anniston. Mr. Crusoe was selected as secretary and treasurer of the company.

The general management of the affairs of the company has been placed in the hands of the Ledbetter & Co. Land & Loan Association. The local manager will be Mr. Wm. G. Ledbetter, who will move up to Piedmont and be at home to all comers. He is an admirably equipped man for this highly important position; for, besides enjoying the confidence of men of means in New York and other Northern cities, many of whom have had

satisfactory dealings with the Ledbetter & Co. Land & Loan Association, he is a man of first-rate executive ability, of quick decision, good judgment and is thoroughly familiar, by reason of his long experience at Anniston, with the ways and means of building up an industrial city. It is a very risky thing to put at the helm of any kind of enterprise a pilot with no familiarity with the rocks that wreck. All the members of this Ledbetter & Co. Association have had experience that will be valuable in the promotion of Piedmont's progress.

With such a directory, and with such a list of stockholders, it goes without saying that Piedmont will pan out substantially; that neither money nor endeavor will be spared in promoting its development; that the favorable beginning made to-day is but an earnest of steady future progress. The fact that such men as these have backed with their money and undertaken to devote their energies to any given town-site, means more than a whole dictionary of words. The readers of the MANUFACTURERS' RECORD will naturally desire to know all about the place these men have picked out, and their plans for its improvement.

It may not therefore be amiss to give under separate heads, the result of the investigations made by your correspondent here at the heart of the great brown hematite iron ore district of Alabama, close to which by rail lies coking coal fields, and still closer great virgin forests, which will supply not only enough charcoal to warrant the building of a car-wheel iron furnace, but likewise timber for all kinds of wood-working industries.

PIEDMONT'S LOCATION.

A BEAUTIFUL WELL-DRAINED TOWN-SITE AT THE NATURAL MEETING-POINT FOR RAILROADS AND WAGON ROADS, AT A HIGH AND HEALTHY ELEVATION, WITH AN EXCELLENT SUPPLY OF FREE-STONE WATER.

While it must be confessed that the pioneers in the settlement of the South had no more idea of the eligibility of town-sites than a born blind man has of color, nevertheless they somehow or other had a wonderful knack as path-finders. And this is verified by the fact that the educated, professional path-finders, whom nowadays we call civil engineers and who run the lines on which railroads are built, generally follow the paths that were blazed by the early settlers, or rather the early explorers and adventurers. And right here I wish to emphasize the tribute which Rider Haggard, in one of his novels, pays to that spirit which has made the Anglo-Saxon the ruler of the best part of the world, and to lament the fact that the term "adventurer" has been contorted into one of evil shadow, rather than a term of reputable halo as it ought indeed to be. Well, these early adventurers as I shall therefore still call them, those en route from Virginia to the gulf country located the road through the place now called Piedmont, and those from Kentucky, Ohio, and East Tennessee picked out a path to the cotton country that crossed the first named trail just where the East Tennessee railroad meets that great inter-trunk-line link known as the East and West Railroad of Alabama, and where another cross-country dirt-road now runs through to Piedmont is the only available route for the Chattanooga Southern to follow on its way

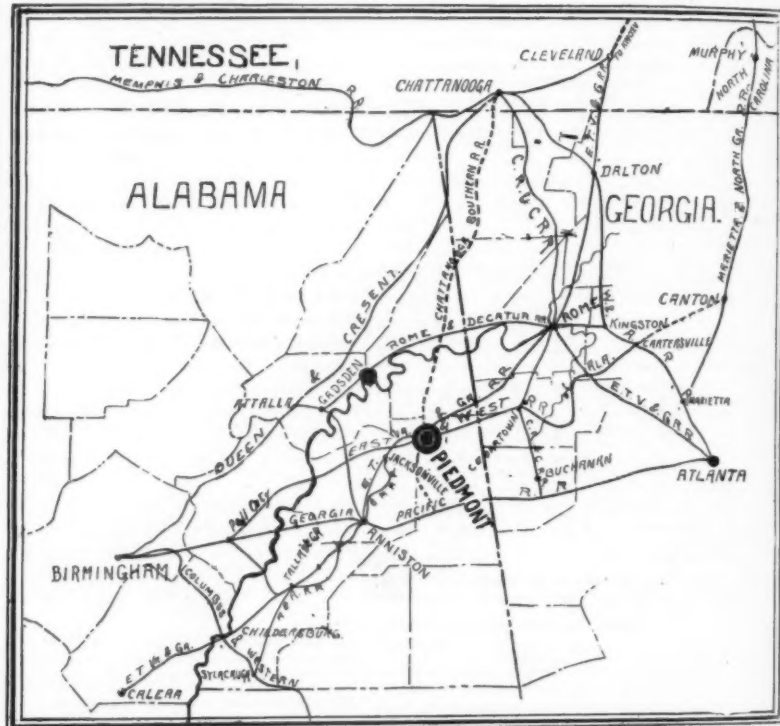
to meet the Georgia Pacific less than a score of miles to the South. While this road will follow a valley all the way it will be flanked by some of the most gigantic deposits of rich brown iron ore that mother earth embosoms.

If you will take the map of Alabama and draw a line almost due south from Fort Payne, the new New England city of the South, you will find at the cornering point of the counties of Cherokee, Calhoun and Cleburne (the three C's) a spot marked "Cross Plains." This is Piedmont, and it was only an accident that prevented it from being to-day a bigger city than Birmingham or Anniston. In fact but for the unfortunate occurrence first alluded to which may fairly be called an accident, there might never have been any city of Anniston, for the Georgia Pacific would have gone to Birmingham up the Choccolocco Valley by way of Piedmont. This bit of history I have never seen in print, and it is one that deserves a paragraph to itself.

The new town of Piedmont, just started with a million and a-quarter of dollars behind it, and which it is proposed to make

murderous episode of "reconstruction." This tragedy begot a comedy—but a most unfortunate comedy it proved—in the following way: The last signer of the several checks to be pooled into an improvement fund for the spot now called Piedmont (but which it was then agreed should be called Peytona) had been filled in and the pen was in the hands of the signer, when he was interrupted by a telegram announcing the "wreck" on the track of the "reconstruction" railroad. The hoary capitalist dashed down his pen and swearing that he believed there would be a general race war, tore up his check and so "busted" the pool.

The foregoing bit of history is just now not only interesting but significant. It shows how this point was considered by competent men, who had sent out experts to select the best available spot for a great manufacturing town. Very few people at that time knew the why and wherefore of the abandonment of the scheme which the threatened race war so speedily annihilated. The consequence was that the location was neglected, and afterwards, when Anniston became the industrial cynosure of this section, it transpired that "the heart of the ore fields" was forgotten.



MAP SHOWING LOCATION OF PIEDMONT.

the Delaware city of the South, in other words a new Wilmington, occupies the spot which a number of New York capitalists picked out in "reconstruction" times as the best location in the mineral district for a great industrial center, because it stood in the very heart of the iron district. The land had been optioned and the necessary money pledged to a pool of several hundred thousand dollars as an improvement fund. The scheme had been so far materialized that only a single check remained to be drawn to make up the money—but the agreement was that unless all should be paid up the pool didn't go. It happened that on the day before the last check (which was for \$80,000) was to be signed by a certain man in New York (whose name I have forgot, but which Major J. F. Dailey of Piedmont can give to any enquirer) there occurred a collision between the newly emancipated negroes and the white people. The negroes imagined that the local whites were responsible for their not getting the "40 acres and a mule" which they had queerly enough been led to expect, and in their malice they massed themselves on one fine Sunday morning and stupidly fired on the white people, men, women and children, on their way from church. The upshot was the lynching of the ringleaders in this

During the period of discontent which followed the temporary collapse of the great Birmingham real estate boom, it was almost impossible to get capital to touch any new town. True, a number of good judges of resources, from time to time, advocated the founding of an industrial town at this point, but none of them had the ear of capital. Finally, the attention of the Ledbetters, of Anniston, was called to the place, and so soon as they had satisfied themselves of its merits as a town site, the destiny of Piedmont was safe. The Ledbetters had not only the ear, but the heart and hand of capital, and when they went North and said, "Come, go in with us into a good deal," there was no difficulty in the way of building up a city. The work was done very quietly. None were invited to come in but the very best men. And when the organization came to be made, there were on hand twice as many applicants for stock as could be accommodated. And so it happened that a good many men who intended to get into the company—vainly calculating that not half the stock would be taken—found at the last moment, like the foolish virgins, that they could not enter the feast. Some of these, however, consoled themselves by buying lots at the low rates offered yesterday, and which, I

understand, will continue to be offered for 30 days. After that prices will be doubled—at least they ought to be.

But I have gone far away from the subject I started out to discuss, the advantages of the place. The site of Piedmont is the highest on the East Tennessee Railroad between Chattanooga and Mobile. Let us, to illustrate, compare Alabama to a watermelon. Now let us take out all the slice between Birmingham and Piedmont. Then let the edges of the rind be pushed together. What would the Piedmont people see as they looked across the incision? They would see the spires of Birmingham's churches away down below. A precipice would yawn at their feet. The men and women on the streets of "the Magic City" would look like pigmies to the astonished Piedmontese. If the same juxtaposition of elevation were brought about toward Chattanooga, the Piedmontese would view that town at their feet. And so too at Anniston. In other words Piedmont occupies a high, dry, gently undulating plain from two to five hundred feet above the level of other noted towns in this vicinity. To be exact, Piedmont is 862 feet above the level of the sea.

The high plain of Piedmont is the meeting point of all the valleys that intersect the Blue Ridge Mountains of North Alabama. Down here they call these mountains the "Blue Mountains," but they are only a continuation of that superb range which begins in Pennsylvania and terminates a few miles south of Piedmont. This high plain is a water-shed, or as the natives call it, a back-bone. That is to say, the water runs away from the town in every direction. There are some lovely spurs or foot-hills close to the town which are adapted for hotels, and for homes, and one or two of them seem to have been made by nature for reservoirs of water. And in respect to water Piedmont has few rivals in the United States. There are free-stone springs close to the town big enough to water 50,000 people. Then there are two big creeks within a mile of the center of Piedmont which would supply a city like Baltimore. There are no mosquitoes here and no malaria. There can never be any epidemic of fever, because in the first place the air is pure and in the second place the natural drainage will be supplemented by a sewerage system that cannot in the nature of things be surpassed.

Again, this is the center of a very rich agricultural region. Peaches grow to great perfection here and the adjacent mountain sides equal Missionary Ridge, near Chattanooga, for small fruits. So far as corn is concerned the valleys centering at Piedmont will produce from forty to eighty bushels per acre. As to the iron ores, it is unnecessary to mention them in detail. The entire region hereabout is full of the same kind of iron ore that is used by the Shelby furnaces, the Clifton furnaces and the Woodstock furnaces. There is one big bank of ore already developed close to Piedmont that will make Bessemer pig. However, in subsequent articles, the ore question will be thoroughly ventilated. If the iron ore hadn't been reported on satisfactorily, Preston Lea, of Wilmington, Delaware, would never have invested here so heavily.

PLAN OF IMPROVEMENT.

A CHARCOAL FURNACE, TWO COKE FURNACES, A CAR-WHEEL FOUNDRY AND A ROLLING MILL TO BE BUILT AT ONCE BY THE PIEDMONT CO.

INDUCEMENTS TO MANUFACTURERS.

With such enormous capital at the disposal of the Piedmont Land & Improvement Co., inducements can be held out to manufacturers calculated to tempt the

owners of the biggest plants in the East and North to come to Piedmont. Mr. Lea's idea is to eclipse all competitors in inducing manufacturers to locate here. The location is inviting, the transportation facilities unexcelled, for while Piedmont has but two railroads now in operation it will soon have a third, and one of its lines, namely the East & West Railroad of Alabama, is practically a belt line between all the trunk lines in the iron region of the South, viz., the Western & Atlantic, the Georgia Division of the E. T., V. & G. and the Alabama Division of the E. T., V. & G., and the Chattanooga, Rome & Columbus, and the Anniston & Cincinnati and the Georgia Pacific and the Columbus & Western. This great Belt Road, heretofore a narrow gauge, is now being widened into standard gauge and laid with new steel rails.

The company will not only give spacious sites to industries, with side-tracks from the East Tennessee Railroad's main line and from the E. & W. of Alabama, but will moreover subscribe largely to the stock of all meritorious enterprises. Manufacturers contemplating removal to the South should write to Mr. Wm. G. Ledbetter at Piedmont, Ala., or to Mr. Preston Lea, at Wilmington, Delaware.

But in addition to diversified industries which will be aided in locating at Piedmont the company will at once construct a charcoal furnace which will make the best possible car-wheel iron. In order to utilize this the company will construct a car-wheel foundry. Then certainly one and probably two coke furnaces will be built. In order to use their out-put to the best advantage the company will at once build a rolling mill.

The chances are that there will be 10,000 people at Piedmont within two years. Mr. Preston Lea, the president of the company, besides his prestige in financial circles is a man with a great following. His straight integrity and fidelity to trusts, his familiarity with the resources of the adjacent region, his excellent judgment and his extraordinary personal attractions will combine to make Piedmont to Delaware what Fort Payne has proven to New England.

THOMAS P. GRASY.

WHAT OTHERS SAY OF PIEDMONT.

From the Nashville American's report of the organization of this company we take the following:

"Immediately after the adjournment of the meeting The American correspondent sought an interview with the newly elected president, who responded freely to the scribe's queries, and briefly outlined the aims and policy of the company. He said: 'My individual opinion is, and I think I may say it is shared by my associates, that Alabama is destined to become the richest State in the Union. The mineral resources of the State are practically inexhaustible, and Piedmont is situated in the very heart of the richest territory. The town is not a new one, although comparatively unknown; but it has hitherto lacked capital, and this we propose to supply.'

Lying in a fertile valley in the northeast part of Calhoun county, it is surrounded by hills that are covered with a vast amount of the most valuable timber, pine as well as hard woods, and filled with brown hematite ore that will run on an average of from 58 to 60 per cent. metallic iron, carrying mere trace of phosphorus. As a matter of fact, the ore lies all about us, cropping up out of the ground, and is gotten out at the least possible expense. But we are not dependent on iron alone, fine and free from phosphorus as it is, being the best possible for making steel. The ground is very productive, and a great deal of high-grade cotton is raised within

the immediate territory tributary to Piedmont.'

'Then you contemplate a cotton mill?'

'Oh yes, it will come in time. But what we propose to do immediately is this. Our company owns about 2,500 acres of land within a radius of one mile of the center of the town. As you see, we have already begun the work of widening and straightening old streets and opening new ones. All this we will do without a dollar of expense to the city. We will also at once begin the erection of a 50 or 60-ton charcoal furnace, and also to establish small industries for the consumption of every pound of iron we turn out.'

'Then you don't propose to put your iron on the market?'

'Not by any means. Our policy will be different from that pursued by any company that has yet undertaken to develop the resources of the South. I believe, and my associates coincide with me, that the true policy for the South to pursue is to manufacture all the raw material it produces. Of course this must come in time in all parts of the South, but we hope to accelerate the movement, at least in this part of Alabama, by ourselves establishing plants for the consumption of our iron and the cotton that is produced in this immediate section.'

'All of this will require a good deal of money, will it not?'

'Yes, but we are prepared to put it up. Our company is capitalized at \$1,250,000, and if more money is needed it will be forthcoming.'

'It will not then be the policy of the company to solicit the establishment of industries by outside parties?'

'Of course, we will welcome any and all comers. We will sell our lots for building purposes at their actual value now and not attempt to produce a boom, which never does a town any good, by asking the possible future value of the ground. To all who desire to establish industries here the company will freely donate such as they need, and to show our faith in our own enterprise we will take stock in theirs, and put up the cash, too.'

'What else do you propose to do?'

'Well, you know at present Piedmont is only a small country town of 1,500 people, and in order to make an industrial center of it it will be necessary to establish water works, electric lights, etc. Water of the best free-stone we have in abundance, and the growth of the town and increase in value of property by reason of the plants established here will enable the city authorities, through an increased revenue, to build a sewerage system and make such other improvements as will be necessary. Another thing that will operate in our favor is that we already have two railroads—the East Tennessee, Virginia & Georgia, and also the East & West of Alabama, running from Cartersville, Ga., to Pell City. This road intersects six trunk lines. The two roads give us direct connection with all of the principal cities North, South, East and West. We do not propose, however, to rest contented with two roads, but will offer inducements to neighboring trunk lines to build into Piedmont.'

'Do you propose to throw open the town by means of an auction sale?'

'No, sir, most decidedly not. We intend to give everybody a chance to come in right away and buy lots at equal prices. We don't want any real estate excitement and a lot of mushroom houses. We will ourselves establish a bank with a capital of \$50,000, and will put up a handsome three-story brick building for that purpose and for the general office of the company.'

'Then, in short, your company proposes to furnish the money to establish such industrial and commercial institutions as are necessary for a basis upon which to build a city?'

'That is the idea exactly. We don't

expect to have 50,000, or even 20,000, people here within twelve months. We do expect to build up a substantial city in the course of time, and we also expect to make money out of the industries we establish. If we didn't think so we would keep our money in our pockets.'

'You spoke a little while ago of making charcoal iron. Is it the intention of the company to establish some kind of steel works also?'

'Yes. We have appointed a select committee of three to carefully examine and investigate the open hearth Basic process of making steel, and we will hear from them before long. Should the report be favorable, we expect to demonstrate by practical tests within the year that steel can be successfully made from Piedmont ores.'

'How about good coking coal and limestone?'

'We have an abundance of both. Limestone is all around us, and no better can be found in the country. It runs from 95 to 98 per cent. carbonate of lime. As for coal, we have within a few miles of us, directly on the line of railroad, any quantity of stone coal that makes coke which has been demonstrated to be equal to the Pocahontas or the Connellsville coke.'

THE ARCADIAN CITY.

The Age-Herald, of Birmingham, has this to say of Piedmont, Ala., under the above caption:

"PIEDMONT, ALA., Jan. 4.—[Special Correspondence]—There is another debutante among the fair daughters of Northern Alabama—another sister city whose native beauty and natural endowment will win a kingly fortune and an illustrious name.

With three passing decades now and then a suitor has half learned of her charms, but she has remained to the great society of capital unknown until enterprise saw her one day, and, seeing, was captured. He told his friends, and yesterday she stepped into the magic circle, fascinating even in her pinnafors, and one of the most promising of Alabama's fair daughters.

Piedmont is now her name. In infancy she used to be known as Cross Plains, but this was dropped full six months ago. To-day she stands on the threshold of a union with Ceresus, and guests are pouring in from every direction to be present and enjoy and profit by the nuptials. One only needs to be here to-day to appreciate the grand beginning of this new town.

THE QUIET COUNTRY ROADS

that marked the earliest settlement on the old Indian trail which gave the hamlet its early name are thronged with strangers—busy, bustling, enterprising men, who have been coming and going all day long scrutinizing samples of ore, pacing off lots, talking with experts, dickering with old residents and making most thorough investigation of the possibilities of the city, which, in the next few weeks, will spring Aladdin-like from what is now the furzy fields of one of the most beautiful upland valleys of Calhoun county.

Walled in by two well-defined spurs of the Blue Ridge, which are locally known by a dozen different names, is a valley sumptuous alike in scenic beauty, salubrity and mineral endowment. It is in the drainage basin of the Coosa river, and at the foot of the hills that environ it there are at the northern and southern borders two beautiful creeks of mountain spring water—Nautzes and Mill creek. These have each a good fall, and besides adding much in their picturesque curves to the view from what must eventually be the highland residence portion of the new city, afford

AN ABUNDANT WATER POWER

and water supply for the small industries that will multiply in the story of the near future. They will necessitate a condition of things most advantageous to the Arcadian city, for they will remove the industries from the immediate commercial center, yet restrain them within bounds that will prevent the building up of suburban centers to draw from, rather than contribute to the commercial center of the town. Be-

tween these creeks there stretches a rich plain two and a half miles in width and three in length, gradually swelling to the center with just sufficient rise to give two distinct water sheds and level enough to make a perfect city, with natural sanitary conditions that are as nearly ideal as can be found anywhere in the country. If for no other than this condition of assured healthfulness, the site would be a most inviting one. It is 862 feet above sea level, swept by the air that has been filtered and purified by contact with the piney-topped hills adjacent, and possesses a balmy tonic influence that is felt as soon as one inhales it.

THE SUPPLY OF DRINKING WATER

is not, however, dependent upon these crystal creeks. To the north of the town, scarce a mile from the center, a bold spur of the mountain cuts a profile of 250 feet against the soft, grey clouds of twilight. At the foot there are three wonderful springs, one of them alone large enough to supply a rivulet 2 feet wide and 1 foot in depth. They are of the coldest free-stone water and come bubbling up from the crannies in the mountain's foundation; and in the erection of the contemplated water works the water from this spring will be forced to the summit by hydraulic rams, there stored, and delivered at the highest fire pressure all over the plains below. *

CHEAP FUEL IN ABUNDANCE.

In considering the question of manufacturing fuel is at once suggested. Piedmont is within 25 miles of an excellent and almost inexhaustible supply of coal—the extended field of the Coosa valley. This contains superior coal for coke, as well as crude consumption, and the railway facilities place it practically at the very door of the new city. The coals and coals on exhibition now at the company's offices have been examined by many experts, and the enthusiasm which is manifested is the best evidence of their opinion of them. There are some coal deposits much nearer, but as yet they have not been scientifically examined, and it seems to be the policy of those who are interested in the new city not to give out for publication anything but that which is authoritative and demonstrative beyond peradventure. If these deposits, which are just over the ridge, turn out as expected, they will only add to the advantage of the city. The other field, which is known as a phenomenally rich one, will insure cheap and reliable fuel.

THE TIMBER RESOURCES

of this region are unsurpassed. From the town site to the Coosa river there extends an unbroken forest in all its untouched grandeur. The woodman's axe has not yet touched these miles of hardwood, which will furnish the crude material for small manufactures of every kind. Pine, oak, hickory, poplar and chestnut predominate, with here and there a sprinkling of the other valuable timbers that belong to this latitude. Contemplated branch roads will connect this entire region with Piedmont, and an immense lumber business is one of the things which it is expected will contribute to the prosperity of the new city. Not only are these forests available for this, but they have a much more important bearing on the immediate development of the project. They will afford charcoal of the finest quality for the furnaces that are to be at once erected. The plan adopted by the projectors of the new city includes the manufacture of car-wheel iron, and their timber lands will be extensively utilized in producing it.

THE IRON DEPOSITS.

Alabama has developed many wonderful resources, and has become a great iron and coal producing State. Everyone who has taken the pains to examine carefully the wonderful deposits of raw materials that lie within her borders, must admit that the manufacture of iron in this State is but in

its infancy, and that a decade will astonish the world.

The red ore district, which includes Birmingham, has twenty-five furnaces, with an output of 3,000 tons of pig iron. The brown ore district, which includes Piedmont, has nineteen furnaces, with a daily output of about 1,000 tons. From this district comes the celebrated car wheel iron made by the Woodstock, Shelby and Clifton furnaces. Immediately in the heart of this brown ore district Piedmont is located, and is more conveniently located to immense deposits of these ores than any furnace in the district with the single exception of Clifton.

The following analyses, taken from a few properties in and near Piedmont, and which properties are practically inexhaustible, will give you an idea of the ores convenient for use at Piedmont.

The Freeman and Williams banks are on the property of the Piedmont company.

BAKER HILL.	
Metallic iron.....	52.00
Phosphorus.....	00.28
REED BANK.	
Metallic iron.....	52.00
Silica.....	11.00
Phosphorus.....	00.15
WOOD BANK.	
Metallic iron.....	52.00
Silica.....	10.00
Phosphorus.....	00.33
SIMPSON BANK.	
Metallic iron.....	55.00
Silica.....	10.00
Phosphorus.....	00.12
MOWHAN BANK.	
Metallic iron.....	46.64
Silica.....	15.70
Manganese.....	00.57
Phosphorus.....	00.28
GRADY ORES.	
Metallic iron.....	56.00
Silica.....	13.00
Phosphorus.....	00.13
FREEMAN ORE.	
Phosphorus.....	22.00
Metallic iron.....	60.57
Insoluble matter.....	2.34
MANGANESE—WILLIAMS BANK.	
Manganese.....	55.55
Silica.....	2.50
Phosphorus.....	00.10

There is, perhaps, no better authority on iron manufacture in the State than Col. W. C. Amos, of Tecumseh, and in a recent letter to the promoters of the company he states that in all of his examinations of Northern Alabama he has found unoccupied no better location for blast furnaces than at Piedmont. There are two distinct beds of rich hematite ore, and the deposits literally surround the place for miles. *

A SALE OF LOTS.

As soon as the meeting was over and the company thoroughly organized, a private sale of town lots began. The company has already laid off a beautiful street, finished in macadam, which connects the two creeks, which edge the valley. This is 80 feet wide, and will be known as Main street. Four hundred of the 2,500 acres, which the company owns, have been mapped out into a spacious city, with ample reservations for public buildings, parks and the like, and the streets so named and numbered as to make the Arcadian city a model in municipal design.

Within the next few days the company will make arrangements for the immediate construction of a 50-ton charcoal furnace, which will probably be supplemented by two other 100-ton coke furnace plants. To use the product of the charcoal furnace, there will be at once erected a car wheel factory, and a rolling mill to manufacture merchant iron, a State bank with a capital of \$50,000, water-works that will cost \$30,000, an electric-light plant, a fine company building and several other improvements. In addition to these the writer learned of at least a dozen new stores and other business houses that would be begun as soon as the company was organized and actual purchase of the lots could be made.

There will be a tremendous influx of people here during the next week. The policy of the company will be liberal in the extreme to all enterprises that desire to locate here. Every opportunity will be afforded to them to gain eligible city locations, and there is plenty of capital on the ground to take stock in anything that will come with a good business showing.

WHO PROJECTED IT.

Perhaps it is fitting just here to say that the promise of Piedmont is only another example of the energy, enterprise and tested ability of native Alabamians. While it is true that Northern and Eastern capital are interested, at the head of it are bright, able Alabama men, who have already won their spurs and shown signal ability as financiers and managers. Messrs. Ledbetter & Co., of Anniston, consists of J. M. Ledbetter, J. H. Ledbetter, W. G. Ledbetter and B. F. Johnson. All of them were Marion county boys, who found themselves with their own way to carve but a few years ago. They were enthusiastic lovers of their native State, and saw in the development an opportunity to do much for the State while helping themselves. They went enthusiastically to work, and in Anniston have built up a strong and valuable banking house which has done much for the enterprises of that city. Whatever they have undertaken has been carried to success, for they know no such word as fail. Far-seeing and conservative in their enterprises, and liberal in their dealings, the name they have built up will do much toward hastening the development of the new city among the hundreds of friends they have made on every hand."

Arkansas Silver Mines.

[Correspondent Memphis Appeal.]

While idling my time away in Hot Springs a few weeks ago I heard a good deal of mines and mining in the country near Silver City, and having spent some time in the mining regions of Colorado, my curiosity was aroused to see what was being done and what an Arkansas mine was like. It happened, by good fortune, just as the idea was forming in my mind, I met a friend; so we made our arrangements at once for the trip. Packing a couple of small valises and putting on our roughest clothes, we stood equipped for the journey, starting out in a buggy behind as strong a pair of horses as any one would like to see.

A wilder or more deserted looking country than the one we drove through could not be found—rugged hills, boulders in the road and not a living soul to be seen in the whole day's ride. We were used to this in mining countries, but were surprised to find it in a country so near Hot Springs. And the Arkansas mines! It is a continual surprise to any one familiar with the mining regions of the West, that some one has not made a bonanza out of the mines here long ago. Ledges of rich ore crop out all along the vein that, in Colorado, would be paying handsome profits by working, and it would be impossible to purchase at twenty times the price I am told these can be bought for. To one familiar with mining it seems inconceivable how men could have put in so much ill-directed time and money in attempting to develop.

I met here Capt. Charles Crockett, of whom I had heard in Colorado, and who, it seems, was attracted first by curiosity, like myself, to examine the country. The Captain was here with an expert to report on mines for some Memphis parties who are interested with him. I was shown a sample of ore that we were told would assay nearly 2,000 ounces of silver to the ton.

We spent a pleasant evening together around the camp fire talking of old times in Colorado, and with the men at work and the sound of the pump going on all the time, it seemed more like a Western camp and the old days of Leadville than what we had expected of an Arkansas mine. The Captain seemed confident that he had struck a big mine that would prove a dividend payer from the start, and we were boomed enough ourselves to feel a good deal like joining in with the boys on their chances for a fortune. This looks to be about the first well-directed movement in the direction of developing the mines, though we saw plenty of other good properties that would give profitable returns from working.

IRRIGATION.

What Irrigation Promises To Do For Florida's Trucking Interests.

[Spec. correspondance MANUFACTURERS' RECORD.]
ST. AUGUSTINE, FLA., Jan. 2, 1890.

The great drawback to fruit and vegetable farming along the east coast of Florida, as in other sections of the South, is the long continued droughts. With sufficient moisture good Florida land can be worked 12 months in the year. Irrigation has been tried, and in all cases has proved successful, but the systems generally known to the agriculturist are too expensive. About one month ago Mr. V. J. White, owner of Rose Prairie farm, situated near Merrifield Station, about 18 miles from this city, invited me out to see in operation a system of irrigation and drainage which he had planned and tested.

While driving from the station to the farm Mr. White informed me that he was a strong believer in irrigation, and that he had spent \$1,000 per acre in irrigating his model farm at Ormond, on the Halifax river. Early in September, 1889, while looking over some prairie land, he found that there existed a good clay sub-soil one foot beneath the surface. The idea struck him that this clay would carry water a long distance and that the land could be irrigated without laying expensive piping. He decided to give it a trial, and while he laid off a tract of 40 acres he employed a well digger to bore a well. Around the prospective garden Mr. White dug a ditch ranging from one to three feet deep. Through the tract he dug irrigating ditches one-eight of a mile long and 20 feet apart. He then built a draining canal a quarter of a mile long to a creek, securing a fall of six feet to the quarter of a mile.

When the ditching was completed the well drill had gone down 157 feet and the little two-inch well spouted out 300 gallons of water per minute. Mr. White decided not to bore additional wells until he ascertained what the one would do. That night he turned the water into his garden, and the next morning, much to his astonishment, he found that every ditch on the 40-acre tract was full of water.

Delighted with the complete success of his experiment, Mr. White went to work at once to plant seeds for vegetables and to set out plants from his Ormond farm. It was just two months after this that I visited the place. When we reached the farm there was presented the most wonderful sight ever witnessed in truck farming. Long rows of peas, cabbages, beets, radishes, cauliflower, onions, turnips and other vegetables were sticking their green heads above earth. The plants of the different vegetables looked like twins, so uniform were they in size. It was a scorching hot day, but the water was in the ditches and men were at work in the heat of the day planting out cabbages. It was a remarkable sight, when it is remembered that two months before the land was a prairie covered with grass waist deep.

One week ago I again visited the garden. It was Christmas Day, and with Mr. White's family I ate dinner on the veranda of his house. The garden which I had seen in its infancy one month before had developed wonderfully. Mr. White was gathering the fifth crop of English peas, and the same vines were continuing to bloom. He had gathered a big crop of radishes, beets, cabbages, turnips and other vegetables. Everything in the garden was as healthy as could be, growing on the sour land at a remarkable rate. Mr. White, from that garden and his Ormond farm, is supplying the demand for vegetables from this city as well as Palatka.

During the past five months there has been no rain in this section, and truck farming has suffered. Mr. White, however, has no difficulty. He simply turns on the water when his farm needs moisture, and in ten hours the tract is irrigated. By opening his flood-gate the land is drained in four hours. The cost of this system of irrigation and draining, Mr. White says, is very small. His artesian well cost him less than \$200, and the digging of the ditches, which was done by his farm hands, cost him about \$200 more. The land was ploughed twice.

Nearly all of the good land hereabouts has a clay sub-soil, and farmers are making arrangements to adopt Mr. White's system of irrigation, now that it has proved such a success.

FRED W. KETTLE.

The NORTH CAROLINA STEEL AND IRON COMPANY,

WORKS--GREENSBORO, N. C.

Iron Mines---Chatham, Moore and Madison Counties, N. C.

This company starts out with the most flattering prospects of any company in the South. It has been organized for the manufacture of Bessemer Pig Iron and Steel. It owns large bodies of high-grade Bessemer, Mill and Foundry Iron Ores, and has enough **Ore in sight to supply 1,000 tons a day for fifty years.**

Coke will be brought from Eastern Kentucky by the Western North Carolina Railroad, or from Virginia by the Norfolk & Western and the Cape Fear & Yadkin Valley, which two roads will within a year connect at Mt. Airy.

The company has secured the famous "Ore Hill" and other iron ore lands amounting to some 2,000 acres in Chatham and Moore counties, N. C., on the line of the Cape Fear & Yadkin Valley Railroad, 40 miles from Greensboro; other magnetic iron ore lands in Western North Carolina, ample limestone 35 miles from Greensboro, on line of Cape Fear & Yadkin Valley Railroad, besides other franchises and about 2,000 acres of land in and around the City of Greensboro, which is to be laid off in Streets, Building Lots, Manufacturing Sites and Parks.

The company will at once proceed to erect at Greensboro a 150-ton daily capacity iron furnace plant for the manufacture of Bessemer pig iron, to be followed by others, with a steel plant and rolling mills for making steel rails; these plants to be at Greensboro. The company will foster and encourage all kinds of industries, and will make Greensboro a large manufacturing city, because, situated as it is, with its railroad connections, making it accessible to large bodies of the best kind of Bessemer ores, lime-

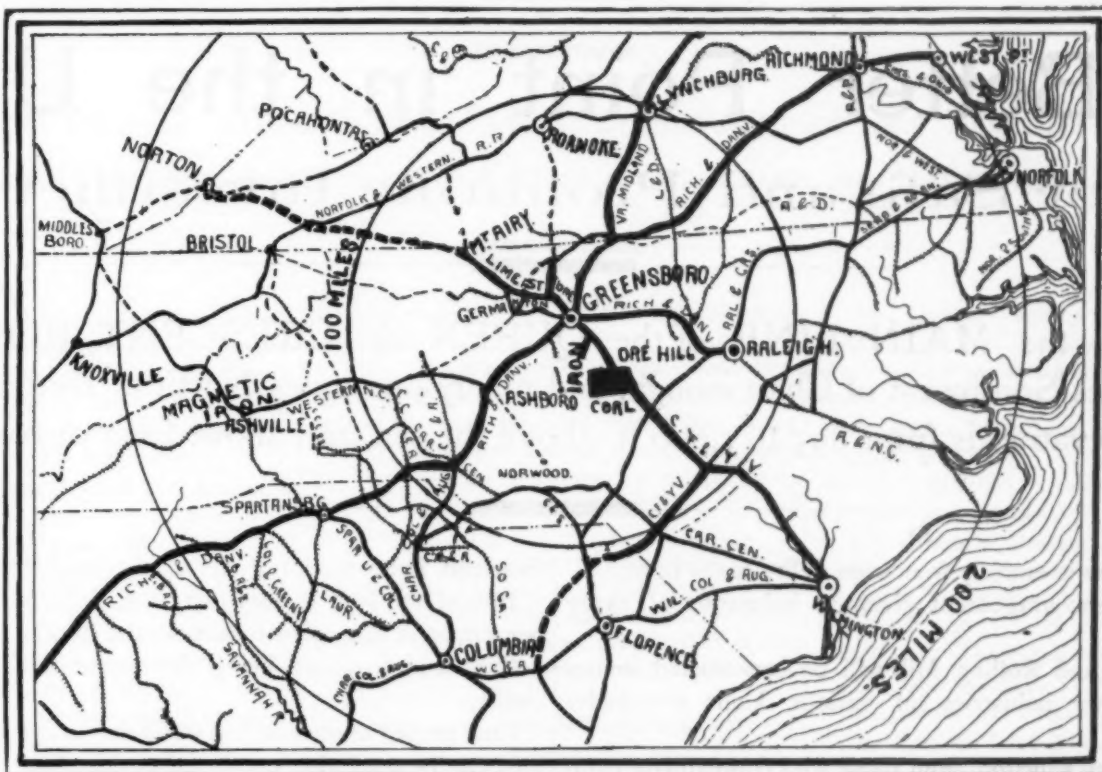
stone and coke, it is estimated that Bessemer pig can be made here at \$8 per ton. Iron has been made from these "Ore Hill" ores ever since before the Revolutionary war. Over 25,000 tons of charcoal pig have been made from these ores.

The Confederate government appropriated several millions of dollars towards making these iron ores available for war purposes, and the work on them was only stopped by the close of the war. The ores consist of brown hematites that average 56 per cent., red hematites that average over 60 per cent., and magnetites that average about 60 per cent., all of which are practically free from phosphorus and are low in silica, besides the famous black band ores.

The average run of pig made at the "Ore Hill" furnace in April, 1865, was 63 per cent., which shows what the ores will do.

These properties have been favorably reported on by such men as Prof. Emmons, Commodore Wilkes, Prof. Genth, Prof. Shaffer, Prof. Kerr, Prof. Wilber, George G. Francis, M. E., S. A. Richards, Smith Newman, Thos. P. Williams and many others, and from working an analyses of the ores show them to be in large bodies and high grade pure ores, from which to make high grade pig metal and steel.

This much for the ores. This company is located at the prosperous City of Greensboro, with all its various advantages, and is backed by the fostering care of the Richmond & Danville and the Cape Fear & Yadkin Valley Railroads, and officered by men of thorough business experience.



MAP SHOWING THE LOCATION OF GREENSBORO AND ITS RELATIVE POSITION AS TO ORES, COKE, LIMESTONE, RAILROAD AND WATER TRANSPORTATION.

Analyses of the Ores.

	BROWN ORES.		RED ORES.		MAGNETIC ORES.	
Metallic Iron.....	57.41%	58.67%	67.48%	68.74%	56.00%	64.00%
Phosphorus.....	none.	none.	none.	none.	none.	none.
Silica.....	1.42	3.79	2.10	1.40	4.25	3.10
Sulphur.....	none.	0.44	trace.	trace.	none.	none.
Titanium.....	none.	none.

Cost of Making Bessemer Pig Iron at Greensboro, N. C.

Mining 1 3/4 tons 60% ore at 50 cts. per ton.....	\$.83
Freight 1 3/4 tons 60% ore, 40 miles, at 1/4 c. per ton per mile.....	.50
Coke, 1 1/4 tons, at \$1.65 f. o. b. at Pocahontas.....	2.07
Freight 1 1/4 tons coke, 245 miles, at 1/4 c. per ton per mile.....	1.53
Limestone 25c. Labor \$1.00.....	1.25
Maintenance 50c. Repairs 50c.....	1.00
Interest 25c. Salaries 50c.....	.75
Total cost ton of pig iron.....	\$7.93

Bessemer pig iron can be made here at these figures (\$7.93 a ton) and there is no other place in America where it can be produced at a lower cost; but even if calculations be based on a cost of \$10 a ton, the profits would be more than satisfactory, whether the iron be shipped North or be manufactured into steel rails here, as is intended.

Besides this, "The North Carolina Steel and Iron Co." own about 2,000 acres of land in Greensboro, that they will lay off into Streets, Lots, Manufacturing Sites and Parks. This land was secured at very low figures, and inside of a year it will be worth more than the entire capital stock of the company, without any real estate booming.

GREENSBORO is now a prosperous town of 7,000 inhabitants, and has all modern improvements and many manufacturing enterprises.

The North Carolina Steel and Iron Co.

OFFERS A PART OF ITS

\$1,000,000 Capital Stock at Par.

BOOKS OF SUBSCRIPTION ARE OPEN AT

Davis & Wiley Bank, Salisbury, N. C.

The National Bank of Greensboro, Greensboro, N. C.

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SEND FOR PROSPECTUS.

FORT PAYNE, Alabama.

★ COME TO ★

The NEW ENGLAND CITY of the South.

Climate Unsurpassed. Abundance of Pure Water. Drainage Excellent.

No Better Point in the Union
For Safe and Profitable Investment.

Situated on the MAIN LINE of the QUEEN & CRESCENT ROUTE, fifty-one miles Southwest of Chattanooga, and ninety-one miles North of Birmingham.

Elevation is from 895 to 1,600 ft above the sea, and above fever districts.

DeKalb County is entirely free from debt; taxes light.
Most liberal encouragement given to industries of every kind.

Iron Furnace and Rolling Mill will be constructed immediately, and other industries of various kinds are under contract.

Correspondence solicited from those who contemplate coming into the South to establish any kind of manufactories.

The different industries will employ at least two thousand skilled workmen, which will secure a population of over ten

thousand, independent of the many industries contemplated.

Iron of the best quality can be manufactured at as low cost per ton as in any other locality in the South.

Coal and iron are being developed rapidly of a superior quality.

Fine timber abundant and wood-working machinery of every kind can be profitably employed at this point.

The Company is prepared to give every reasonable encouragement to manufacturers who will locate at this point.

✉ Correspondence solicited.

CAPITAL \$5,000,000.

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DENISON, TEXAS.

The "Yankee" City of the Southwest,

— AND —

* GATEWAY *

— TO THE —

GREAT STATE OF TEXAS.

The City of Denison presents the Finest Opportunity of any City in the Southwest for the Investment of Capital in Large or Small Sums.

DENISON is situated in Northeastern Texas near inexhaustible beds of coal and iron, surrounded by the finest fruit lands in the world, and adjoining the INDIAN TERRITORY, which, in the nature of things, must in a few years be opened to settlement.

The growth of Denison has been a natural one, the city having reached its present size—16,800 population—in sixteen years.

The city is regularly and beautifully laid out. Railroads run from it in four different directions. The Missouri, Kansas & Texas alone does an enormous business, having 54 miles of switch track in Denison, employing 500 skilled workmen and disbursing \$150,000 a month in wages.

The first public school in the State was established here, and the city's elegant two and three story brick school buildings, surrounded by attractive grounds, are well arranged for the use of the white and colored children. Its schools are in session ten months in each year.

We have sixteen church societies, seven of which are colored.

The city is well supplied with pure water from its numerous private wells—dug in the ground—and its first-class system of water works, giving the citizens ample protection against serious loss by fire, and enabling the insurance companies to rate the city first class as to fire hazard. Rate of taxation low.

The city has four miles of street railway, with six miles now building to be operated by steam motor; has two electric light companies and a telephone plant. It has an influential New England colony, and counts among its citizens people from every State in the Union.

A large hotel, to cost \$125,000, is to be erected here this year, and a large steel plant with \$2,000,000 of capital is contemplated.

30,000 bales of cotton were shipped from Denison in 1888. 200,000 baskets of strawberries and several carloads of peaches and other fruits have been shipped to market this season.

The Denison Canning Co., capitalized at \$100,000, has just been organized, and ground has been broken for a large fruit and vegetable canning factory.

A cotton mill company is being formed with a capital of \$500,000. Denison citizens have subscribed \$150,000 to this enterprise; Eastern capitalists will add \$350,000.

The climate of Denison is magnificent, situated nearly 800 feet above sea level. In summer it is warm, but far cooler than many cities farther North, and from 6 P. M. until after sunrise it is always cool. The city is very healthy.

The capacity of the ice factory is being increased from a daily output of 15 tons to 30.

The Denison Land & Investment Co. is prepared to give every reasonable encouragement to manufacturers, and solicit correspondence from such manufacturers as contemplate coming into the Southwest to locate.

Address all communications to

THE DENISON LAND & INVESTMENT COMPANY, DENISON, TEXAS.

Paid-Up Capital, - - - - - \$1,200,000.

OFFICERS:

W. P. RICE, President.

MILTON H. FRENCH, Vice-President and General Manager.

ARTHUR L. BERRY, Secretary and Treasurer.

DIRECTORS:

W. P. RICE, Kansas City, Mo.
J. M. FORD, Kansas City, Mo.
A. R. COLLINS, Denison, Tex.

B. J. DERBY, Burlington, Vermont.
PAUL LANG, Oxford, N. H.
M. V. B. CHASE, Augusta, Maine.

MILTON H. FRENCH, Thomaston, Maine.
A. H. COFFIN, Denison, Texas.
JOS. B. LINCOLN, Boston, Mass.

MIDDLESBOROUGH,

✱ KENTUCKY. ✱

"The Wonder of the Age in Town Building."

The Future Iron *and* Steel Center of America.

THE PASSAGEWAY FOR RAILROADS BETWEEN THE WEST AND THE EAST.

A SOURCE OF COKE SUPPLY FOR THE SOUTH AND WEST.

THERE ARE NOW UNDER CONTRACT:

A Basic Steel and Iron Plant, daily capacity 300 tons, to cost \$1,000,000 and to employ about 1,000 hands.

An Iron Rod Mill; A Sheet Mill; A Nail Mill.

Two Coke Iron Furnaces, 150 tons daily capacity each, and one Charcoal Furnace.

A \$500,000 Tannery—the largest in the world.

Fourteen Coal Mining Enterprises, to employ about \$2,000,000 capital.

A Dozen Wood-Working Enterprises.

A Twelve-Mile Belt Railroad.

Tile Works, Fire and Building Brick Works, and a dozen or more other enterprises.

\$17,000,000

Already Invested in the Development of Middlesborough.

Other New Industries are Being rapidly added to those already in operation and contracted for.

COAL, IRON, TIMBER

AND OTHER RAW MATERIALS.

DELIGHTFUL AND HEALTHFUL MOUNTAIN CLIMATE,

WHERE MALARIA AND THROAT AND LUNG TROUBLES ARE UNKNOWN.

Elevation from 1,300 to 2,400 feet above the Sea Level.

SURROUNDED BY VALLEYS OF RICH AND PRODUCTIVE FARM LANDS.

SEND FOR CIRCULARS, PROSPECTUS, MAPS, ETC., TO

MIDDLESBOROUGH TOWN COMPANY,
MIDDLESBOROUGH, KY.

200,000,000 TONS OF BROWN IRON ORE

IN SIGHT AT

BLUFFTON,

HIGH, HEALTHY AND HONEST.

GOOD PEOPLE AND GOOD WATER.

Cherokee County, Ala.

LOCATED UPON THE ALABAMA DIVISION OF THE EAST TENN. VA. & GA. RY. SYSTEM.

It is impossible to describe by words the enormous quantity of iron ore that is in sight on the land of this company. Said a prominent railroad man of the South: "I could not believe your statement as to the quantity, (200,000,000 tons in sight), but now that I have seen your ore deposits, I wonder how you put so low an estimate on them."

Prof. Robinson, of Bowdoin College, Brunswick, Maine, says: "I found at Bluffton iron ore in abundance, partly in solid cliff masses containing hundreds of thousands of tons, and partly in the form of gravel and small boulders lying in great banks similar in appearance to the gravel banks of New England. Whether there was as much of the gravel as of the bluff ore I could hardly judge, but it was very clear that the quantities of both were simply enormous."

G. S. Patterson, mining engineer, of Anniston, Ala., reports: "The amount of ore in sight was certainly beyond my expectation, though I was prepared to find a large deposit. The Bluff, as it is called, is a solid mass of ore on the side of a mountain, easily approachable, and can be mined cheaper than at any point in Alabama or Georgia, with which I am familiar."

Mr. Wm. H. Edmonds, of the Manufacturers' Record, says: "As to

the quantity of ore here, I don't suppose that all the furnaces in Alabama could use it up in a lifetime."—See Manufacturers' Record May 18, 1889 article entitled "BILL ARP AND BLUFFTON."

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.

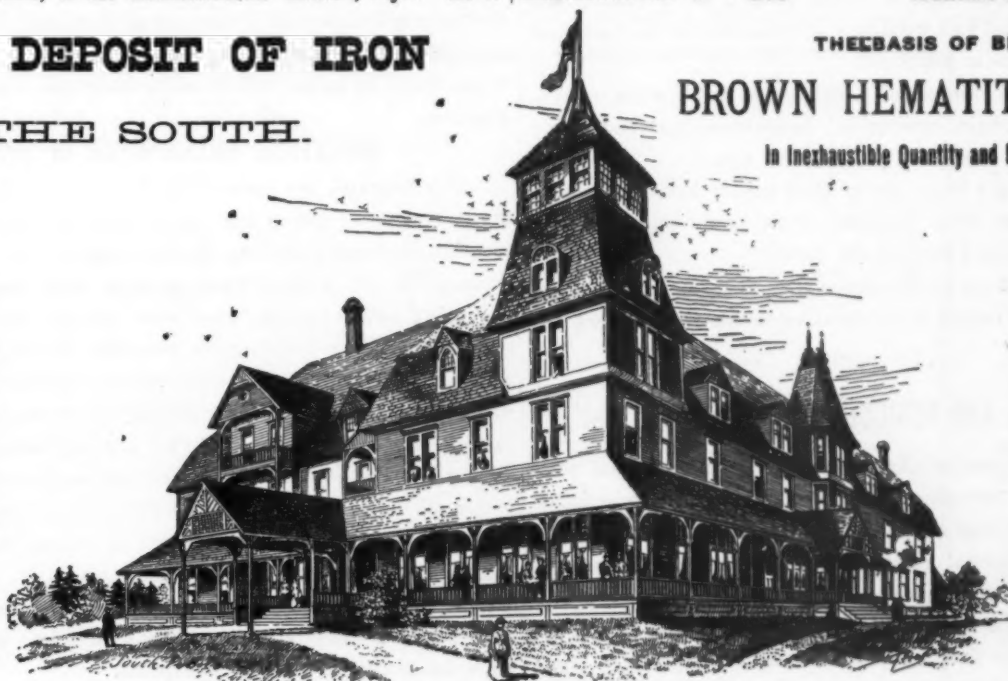
With high grade ores, analyzing over 50 per cent. metallic iron, delivered at the furnace at the above-named price, is there any possibility of such a place as Bluffton not being able to produce iron at figures which will yield a profit despite the duldest of dull times?

Prof. J. H. Pratt, of Birmingham, Ala., reports on samples selected from our property by Mr. Edmonds and Mr. G. S. Patterson as follows:

The sample of brown iron ore, marked "Bluff Ore," contains—	The sample marked "Gravel Ore" contains—
Metallic iron, - - 52.37 per cent.	Metallic iron, - - 53.23 per cent.
Phosphorus, - - 0.783 "	Phosphorus, - - 0.931 "
Silica, - - 14.60 "	Silica, - - 6.25 "
Water combined, - 8.10 "	Water combined, - 10.20 "
Moisture at 100° C - 2.50 "	Moisture at 100° C - 1.68 "

LARGEST DEPOSIT OF IRON IN THE SOUTH.

Ore can be delivered at furnaces built here at a cost not exceeding 50 cents per ton.



THE SIGNAL—NOW OPEN AT BLUFFTON.

BROWN HEMATITE IRON ORE

In Inexhaustible Quantity and Excellent Quality.

Located on the Selma Division of the East Tennessee, Virginia & Georgia Railway, midway between Rome and Anniston, and only two miles and three fourths from the East & West Railroad, of Alabama.

FREE MANUFACTURING SITES.

Rich Manganese Deposit.

There are several very large and rich outcroppings of Manganese Ore on the company's property, and the deposits have been examined by experts and pronounced exceedingly valuable. Specimens have been sent to various steel works in Pennsylvania, and the result is a large inquiry about the ore. From present development can be seen several hundred tons of this ore. There is always a ready market for manganese, and it is quoted at \$18 to 20 per ton in Pittsburgh and Chicago. More extensive work will be done on these deposits within a very short time, as the banks are easily accessible. Shipments will soon be made.

OTHER RESOURCES.

Fire Clay and Brick Clay—Yellow Ochre.

On this property are large deposits of fire clay, which has stood the highest test. Shipments have been made to Chattanooga, Tenn., and it is pronounced a superior quality. A fire brick works could be established here that would prove extremely profitable.

In brick clay there is an inexhaustible quantity, with an abundance of water running through the clay land. Brick manufacturing here would pay handsomely, and the company would lease the clay beds for a term of years at a very low royalty.

The four charcoal pig-iron furnaces surrounding this property are nearly as valuable to this place as if they were located on the land of the Bluffton Company. The pig iron manufactured by them could be bought and utilized here for every kind of manufactured iron. They are so near that freight on the raw material would be comparatively nothing. Surrounding us, as these furnaces do, it makes Bluffton a centre.

SEND FOR PROSPECTUS. ADDRESS

Bluffton Land, Ore & Furnace Company, Bluffton, Ala.

FACTS ABOUT FLORENCE.

LOCATION.

Florence is in North Alabama, near the Tennessee line, on the Tennessee river, which is navigable here for large steamers. It is on the Memphis & Charleston Railroad, and the Nashville & Florence branch of the Louisville & Nashville Road.

AGGREGATE OF ADVANTAGES.

There are many places in the South possessing the advantages of a good climate, healthfulness, natural resources and manufacturing capabilities more happily combined and in a higher degree than can be found in any other part of the country. It is believed, however, that at no point in the South, and hence nowhere in America can there be found an aggregate of so many unsurpassed advantages and attractions as exist at Florence.

IRON AND COTTON MANUFACTURING.

Florence can make iron as cheaply as any place in Alabama. It has facilities for the manufacture also of cotton goods equal to those of any other place. Anything that uses wood as a raw material can be made here at as low a cost as anywhere in the South.

Thousands of acres of iron ore of a high grade within a few miles of Florence are owned by Florence companies. Limestone is quarried within the town limits. There is enough of it to last for ages.

Cotton mills would get a large part of their supply from the country around Florence. Cypress creek furnishes water power and mill sites enough to make Florence the Lowell of the South.

North of Florence, and up the Tennessee river, there are large areas of timber, embracing a wide variety of hardwoods—forests that the axe has never touched.

COMMERCIAL AND AGRICULTURAL FACILITIES.

Besides its industrial possibilities, Florence is a point of great commercial importance, and is becoming the center of an extensive mercantile business. It has the advantage of both rail and river transportation and of competing railroads. Several additional railroads are now under construction to open up new trade connections to Florence.

Florence is surrounded by a wide extent of fertile and productive country, as well adapted for farming, stock raising, fruit growing, truck farming, dairying, &c., as any in the world. Further, it has a climate that is delightful the year round. Its health record cannot be surpassed. It has no malaria. In fact, people who live here enjoy a remarkable exemption from ailments of every sort. It has an abundance of the purest water.

BEAUTY OF LOCATION.

For beauty of location Florence is without a peer. The Tennessee river at this point is as romantic and beautiful as the Hudson. The rolling character of the country, the slopes and hills and alternating valleys furnish a picture to charm an artist's eye. The lovely Cypress creek, a deep and rapid stream emptying into the river just below the town, presents at every turn in its tortuous course a scene of entrancing beauty. The views from some of the higher hills are as fair as the eyes of man ever rested on.

Limited space allows here only the briefest summary of a very few of the more important facts about Florence. For more detailed information write to either one of the following companies. Or better still, come down and see for yourself. Investigation is all that Florence asks or needs.

GROWTH.

Florence is making more rapid progress, proportionately, than any other town in America. This is a strong statement but it is true. And its growth is on a solid and permanent basis.

SOLID GROWTH.

Florence is not undergoing any wild real estate boom. Its managers are not seeking to advance real estate prices. It is not their plan to get a quick return for the money they have invested, by the rapid sale of lots at unnatural prices. It is their aim to first build up a town, to locate factories and secure a permanent population, when land will have an actual value and sell at prices from which there will not be a subsequent disastrous reaction. At present real estate is much lower in price than in any other town in the South that has made half the progress Florence has made.

THIRTY NEW ENTERPRISES.

Within the last 12 or 15 months over 30 new industrial enterprises have been located at Florence, with an aggregate cash capital of about \$5,000,000. This remarkable growth is the result of efforts to induce people to simply investigate the attractions of Florence. Investigation and comparison with other places, on the part of any who are looking for a place in the South to locate, will in nearly every case result in the selection of Florence.

INDUSTRIAL ENTERPRISES IN OPERATION.

The following are some of the industries in Florence. Some of these are in operation; others are nearly ready for work and others have but recently commenced work on their buildings: One of the largest and best furnaces in the United States now in blast, and another under construction; a stove factory; a hardware company, with a capital of \$300,000, manufacturing fine building hardware, &c., the only factory of the kind in the South; a wagon factory, with capital of \$150,000; agricultural implement works; handle factory; woodenware factory; sash, door and blind factories; a cedar bucket factory; a pump factory; planing mills; a factory to make wooden butter plates such as grocers use; a flour mill; a cotton mill in operation, and a \$500,000 mill building and others projected; a jeans factory; a gingham factory; a woolen mill; a cotton gin; a marble company; a roofing and paint company; a shoe factory; a suspender factory; a compress, packet and ferry company; building and loan companies; a canning factory; brick factories; a dummy railroad company, and a number of other enterprises.

\$15,000,000 INVESTED.

The aggregate capital of the industrial, mercantile and development enterprises in Florence exceeds \$15,000,000.

A year ago the population of Florence was 2,000. It is now about 10,000.

There are more than 1,000 carpenters at work in Florence but they can't build houses fast enough to keep up with the increase in population.

INVESTIGATION AND INVESTMENT.

A number of the foremost capitalists and iron and cotton manufacturers, and others, of Philadelphia, Boston and other Eastern cities, after a thorough personal investigation, have just made heavy investments aggregating several million dollars in Florence.

Lauderdale Manufacturing Co. Florence Cotton and Iron Co. } **Florence, Ala.**
 Florence Investment Co. Florence Railroad and Improvement Co.

Morristown, Tenn.

The Plateau City of the Great Valley of East Tennessee

is beautifully located on a plateau of Bay's Mountain, about equi-distant from the Cumberland Mountains which bound East Tennessee on the northwest, and the Alleghany Mountains which bound it on the southeast, and is 300 feet above Holston River, which washes the north base of the plateau three miles from the city. Its mean elevation above sea level is about 1,350 feet, while the hills and mountains immediately surrounding it rise to an altitude of 1,935 feet, affording views of surprising extent and grandeur, and at the same time so modifying the temperature that the thermometer rarely registers higher than 90° in summer or lower than 10° in winter. Its drainage is admirable, and malaria is unknown. It has nearly trebled its population since 1880, having now about 4,000 inhabitants. It is the commercial and business center of the richest and most extensive agricultural district in the State, where all the cereals and all the grasses

and tobacco are grown to perfection, and where fruits and berries abound. It has hundreds of thousands of acres of uncultured forests accessible to it, abounding in Poplar, Pine, Hemlock, six varieties of Oak, Chestnut, Hickory, Cedar, Maple, Birch, Beech, Sycamore, Gum, Locust, Laurel, Buckeye, Mulberry, Ash, Cherry and Walnut. The Celebrated East Tennessee Marble underlies a part of the city, and it is surrounded with rich deposits of Iron Ore, Manganese Ore, Zinc Ore and Lead Ore. It has been said by one who has made a study of the subject, that within a radius of 50 miles around Morristown every variety of iron ore in the United States can be duplicated, and a coke can be made equal to Connellsville coke. We claim without hesitation that Morristown has in its immediate vicinity richer mineral ores, and a greater variety of them, than any city on the Continent.

MORRISTOWN

has Railroad Facilities equal to any city between Lynchburg and Chattanooga, and they will be speedily increased by the completion of the Carolina, Cumberland Gap & Chicago Railway, making the shortest possible railway route between the great cities on the Ohio River, Cincinnati and Louisville, and the seaboard cities, Charleston, Port Royal and Savannah. Besides, the Baltimore & Ohio Railway will probably extend a branch to it from Lexington, Va., and the Tennessee Midland will in all probability be built to Morristown, and a line be built giving direct connection with Atlanta.



MAP SHOWING RELATION OF MORRISTOWN TO THE COUNTRY AT LARGE.

MORRISTOWN

has a citizenship composed almost exclusively of native born Americans. It boasts a splendid system of Graded Schools, Five Commodious Brick Churches, the finest Courthouse in Upper East Tennessee, an Opera House that will seat 600 people, two Solid Well Managed Banks, a flourishing Building and Loan Association, two of the Largest Commercial Flouring Mills in the South, Stove Works, an Agricultural Implement Factory, a Tobacco Factory, a Carriage and Wagon Factory, and many industries of lesser note.

It is lighted with electricity, and has water works under contract, and is now inaugurating a system of street railways. Its climatic advantages, its unsurpassed record for healthfulness, its abundance of pure water, its central and beautiful location, its transportation facilities, its fruitful agricultural surroundings, its contiguity to rich and exhaustless fields of iron, manganese, zinc and lead ores, marble, coal and timber, mark it as a place destined to be the commercial, manufacturing and railway emporium of Upper East Tennessee, Western North Carolina and Southeastern Kentucky.

To expedite this destiny the city authorities have wisely exempted from taxation for ten years all manufacturing establishments that will give employment to fifteen or more persons, and the county authorities have done the like, so that manufacturing establishments will be exempt from all taxation for ten years, except the merely nominal tax for State purposes. There has been no "boom" or inflation of prices at Morristown, and, as it possesses within itself and contiguous to it almost every element of wealth, it now presents the most inviting field for investment of any city in the South.

Persons who may desire fuller information can obtain it by calling on or addressing

MONTVUE LAND COMPANY

POSTOFFICE BUILDING, — MORRISTOWN, TENNESSEE.

NEW DECATUR,

ALABAMA.

The New Industrial City of the Great Tennessee Valley.

LOCATION.—In Morgan County, in the Cereal Belt of Northern Alabama, which includes the great valley of the East Tennessee river. It is at the threshold of Alabama, hence it is known as the Gateway City. It adjoins the old town of Decatur, on part of a tract of 5,451 acres of land purchased by The Decatur Land, Improvement & Furnace Company in 1887 for the purpose of laying out and building up a new industrial city.

RAILROADS.—It is at the junction of two great trunk lines, the Louisville & Nashville system running north and south and the Memphis & Charleston (part of the East Tennessee, Virginia & Georgia system) running east and west, affording direct communication with St. Louis, Evansville, Louisville, Cincinnati and all points further north, west and east, all the cities on the Atlantic Seaboard (north and south), Mobile, New Orleans and other points on the Gulf Coast, also Memphis and all points west of the Mississippi. The connections therefore are complete in every direction. A new road, the Decatur, Chesapeake & New Orleans R. R., intended as a connection with the Chesapeake & Ohio system, is now being constructed in a northeasterly direction, which will give New Decatur a new eastern outlet. The south end of the track is within 25 miles of New Decatur, where grounds for shops and freight yards have been already donated to the new road. The Rome & Decatur R. R., of Georgia, will be extended to New Decatur shortly, being now within 50 miles of that point. This will give a direct southeastern outlet to Brunswick, Savannah and other Southern ports on the Atlantic Seaboard.

RIVER TRANSPORTATION.—The improvements in the Tennessee river at Muscle Shoals, below New Decatur, upon which several millions of dollars and many years of labor have been expended by the government, are practically completed. The first steamer, the "A. C. Conn," passed through the Shoals on November 12th 1889, on her way from Green Bay, Wis., to Chattanooga. The canals will be formally opened in May, when the Tennessee river will be opened to navigation from Knoxville, Tenn., to its mouth at Paducah, Ky., on the Ohio river (728 miles), with 6 feet of water from New Decatur to the Ohio. Paducah is 50 miles above the junction of the Ohio and Mississippi rivers, at Cairo. The Tennessee river drains one of the richest timber, iron, coal, cotton and agricul-

tural countries in the world. New Decatur will have an immense advantage over most of the industrial cities of the New South in being located on this great water highway.

POPULATION.—The population of old Decatur was about 1,200 when the new town was laid out in 1887, that of the two towns combined is now not far from 10,000, largely made up of manufacturers and mechanics.

CLIMATE.—New Decatur is about 700 feet above sea-level, on an elevated plateau free from malarial influences. Extremes of heat and cold are unknown. The air is delightfully pure, breezes are constantly in motion, and the nights are always cool. It is essentially a healthy place, and its climate renders it equally suitable for a summer or a winter resort.

PROGRESS.—The city has a complete system of sewerage, drainage and water supply, electric lights and gas, 60 miles of streets well graded and curbed and lined with young shade trees, a park system of 100 acres, 5 miles of street railways and a Union Railway Depot. The Land Company has expended over three-quarters of a million in cash in improvements, and donated 153 acres to industrial enterprises. A \$20,000 schoolhouse and three churches are nearly completed. The "Tavern" is one of the finest hotels in the South, built and furnished at a cost of \$140,000. There are 16 important industrial plants, exclusive of brick yards, lumber yards, saw mills and sash, door and blind factories, which are numerous. The principal plants are the Louisville & Nashville R. R. Shops, covering 58 acres; the United States Rolling Stock Company's works, covering 50 acres; the Decatur Charcoal Iron Furnace, of 70 tons daily capacity, the Decatur Charcoal & Chemical works; the American Oak Tanning Extract Works; Ivens & Son's Foundry & Machine Shops; the Decatur Cotton Compress; the Decatur Car-Wheel Works, etc. Building is going on rapidly.

INDUSTRIES NEEDED.—It is intended that New Decatur shall be a city of diversified industries. There is a grand opening for the manufacture of iron, wood and cotton in all its branches. The proximity of the vast forests of oak, poplar, ash, hickory, gum and other hardwoods along the river should be a special inducement to establish all kinds of wood manufactures. Another paying industry would be truck farming. The country around Decatur is especially adapted for truck and orchard farming and stockraising.

THE DECATUR LAND, IMPROVEMENT & FURNACE COMPANY will issue in a few days a beautifully printed and illustrated book, entitled

"ON THE BANKS OF THE TENNESSEE,"

Containing a map and 100 questions briefly but fully answered, giving all necessary information about Northern Alabama and New Decatur, for free distribution.

For Maps, Pamphlets and other Information about New Decatur, address

THE DECATUR LAND, IMPROVEMENT & FURNACE CO.

NEW DECATUR, ALA.

SOME SPECIAL CLAIMS

POSSESSED BY

LIBERTY, VA.

TO THE FAVORABLE CONSIDERATION of all classes of prospectors, whether for homes, for investment of capital, for health, or for business enterprise. With the ensuing scholastic year will be opened the superb building of the Randolph Macon Academy, of which a cut is herewith presented. This institution is built for the thorough culture of boys—mental, moral and physical—is under the efficient management of Prof. W. W. Smith, LL.D., president of the Randolph Macon College at Ashland, Va., and has been constructed regardless of cost, to secure every condition essential to the successful attainment of its objects according to the most approved modern standards. Such another educational institution does not exist in the broad limits of the Southern States. In addition to this two handsome Female Academies, constructed upon the same intelligent, liberal and progressive principles as the Randolph Macon Academy, will be built during the coming year, and, if possible, receive pupils in September, 1890. Besides these, Liberty already possesses

shipping facilities and all the climatic, social, sanitary and pecuniary conditions requisite to the retention of skilled artisans once engaged in their employment. The manufacturers of tobacco, woolen goods, etc., already established here have found the local advantages so great that they have refused every inducement offered them to move to other points.

Every reasonable concession will be made to parties seeking locations for the establishment and operation of manufacturing plants, and upon application to the undersigned specific information will be furnished as to all details, both regarding the natural merits of the location, the character of raw materials within easy access and the terms offered to *bona fide* prospectors for sites.

Few better opportunities have been offered investors in Southern properties than the lands immediately adjacent to Liberty—lands possessing the intrinsic merit of natural fertility and productiveness in addition to close proximity to an embryo city,



RANDOLPH MACON ACADEMY.
LIBERTY, VA.

the usual quota of public and private schools, for which progressive Southern towns are noted.

These institutions insure an intellectual and moral tone in its society to the residents of Liberty that must give it pre-eminent attractions over mere manufacturing centers to the best class of settlers.

As a special recommendation to investors, Liberty possesses all the advantages of close proximity to the ore beds and coal fields of the famous mineral region of Southwest Virginia, is the county seat of Bedford, itself an unexplored mine of mineral wealth, representing granite, limestone, steatite, kaolin, the hematite and magnetic iron ores, asbestos, mica, graphite, mineral paints, fire-clay, &c.

Manufacturers would find here, within easy access and at low cost, all the raw materials used in their business. Cheap labor in great abundance, cheap fuel, excellent

bleamed with all the elements essential to steady and permanent growth. Some of these lands are already in the hands of improvement companies and have been laid out in beautiful, wide, shady avenues and divided in lots to meet the requirements of those desiring to build or to invest on a modest scale.

Liberty invites the closest scrutiny of its claims and does not require to indulge in extravagance or deception. Its growth is inevitable. With a superb climate, grand and imposing scenery, a surrounding country of great productiveness, invigorating mountain atmosphere, an unlimited supply of the purest free-stone water, unsurpassed healthfulness, good society and the finest schools for both sexes, enterprising and successful manufacturers, close proximity to the markets of the world, cheap labor, cheap lands, excellent shipping facilities, it lacks nothing but more people to make it a model city.

For information address { J. LAWRENCE CAMPBELL, Secty. Liberty Improvement Co.
R. KENNA CAMPBELL, Manager Longwood Park, Va.

CHARLOTTESVILLE, VA.

OFFERS

Great Advantages and Liberal Inducements to Manufacturers

DESIRING TO LOCATE SOUTH.

Railroad Facilities, Cheap Rates and Rapid Transportation to all Points Unexcelled.

PERFECT CLIMATE. UNLIMITED SUPPLY OF EXCELLENT WATER.

Gas, Electricity and Street Railway. Free Schools and Churches. Different Lines of Manufacturing Enterprises Already in Successful Operation Here.

A LIVE AND GROWING PLACE.

HOME CAPITAL WILL JOIN IN THE ESTABLISHMENT AND OPERATION OF FACTORIES.

COME AND SEE, OR WRITE TO **JOHN M. WHITE, President.**

CHARLOTTESVILLE INDUSTRIAL & LAND IMPROVEMENT CO., Charlottesville, Va.

OXFORD, North Carolina.

✱ THE CAPITAL OF GRANVILLE COUNTY. ✱

SITUATED ON THREE RAILROADS, TO WHICH A FOURTH IS IN PROCESS OF CONSTRUCTION.

The Cosmopolitan Town of the South

INVITES IMMIGRATION TO HER HOSPITABLE BORDERS.

A family living in Oxford educates boys and girls at home and never flees to the mountains or coast in summer to escape malaria, thus saving thousands to the head of the family. Mark well its points.

POINTS.

It was founded in 1770 by Jesse Benton, father of Hon. Thomas H. Benton, yet it is the newest town in the State, having twice doubled its population in past 10 years.

EDUCATIONAL.

It has a large military school and two excellent female colleges, one daily and three weekly papers.

FINANCIAL.

Its taxable property is about \$2,000,000, its population 4,000. It has opera and market house, two excellent banks with ample capital.

INDUSTRIAL.

It sells eight million pounds of tobacco a year in five mammoth brick warehouses; has four extensive tobacco factories, forty or more leaf factories, two iron foundries, three carriage factories, sash and blind factory, electric-light plant, four hotels, a broom factory, steam flouring mill, cigar factory. The noted Kimball Tobacco Company, of Rochester, N. Y., after surveying the whole tobacco field, selected Oxford as a spot to locate its North Carolina business, and are about to erect a third mammoth building.

RELIGIOUS.

Four churches in its midst.

CHARITABLE.

It boasts of the Oxford Orphan Asylum, two hundred and fifty children well cared for; also lodges of Odd Fellows and Masons.

CLIMATE.

It furnishes that equable climate that delights denizens of the North. Annually hundreds come to kill quail in its adjacent fields, or seek health from its pure hilly air and mountain water. It has no chills and fever, no malaria, no epidemics.

ITS BACK COUNTRY AND FUTURE.

Minerals in great richness and abundance fill the soil of Granville. Copper, iron, gold and silver abound. Capitalists from New York and Pennsylvania and elsewhere are working the mines to great advantage. Its farmers make that smooth, bright, waxy tobacco that only the generous soil of Granville vouchsafes to man—tobacco that improves, like old wine, with age, and is shipped with impunity through the humidity incident to an ocean voyage; and that caused Count Bunsen to exclaim that Granville county tobacco was "the finest on earth, free of nicotine." These tobaccos are the highest priced to be found anywhere, bringing often \$1.00 per pound in the leaf. Nestled in the hills of Granville, a very Arcadia, and ideal home among people busy, yet having hearts, awaiting with open arms the coming citizen. Riots are unknown, and there are no race problems to solve.

ACCEPTABILITY.

Oxford is only two hours from Raleigh, four hours from Richmond, Va., and five hours from Norfolk, Va.

FOR FURTHER INFORMATION ADDRESS THE SECRETARY OF THE COMMONWEALTH CLUB, OXFORD, N. C.

"Weigh not so much what men say as what they do; remembering that TRUTH is simple and naked and needs no investiture to apparel her comeliness."—Sir Philip Sidney.

Bessemer 1889.

BESSEMER,

In the Heart of Mineral Alabama, encircled with hills of Coal, Iron and Limestone Rock.

"THE CENTRAL IRON CITY."

BESSEMER
APRIL 1887



Seven Furnaces, output 1890 250,000 tons; Rolling Mill, 100 tons daily; Fire Brick Works, 25,000 daily; Many Lesser Industries.

Offers Thirty Varieties of Hardwoods for Wood-Working Industries.

THE BESSEMER LAND & IMPROVEMENT CO., this new year, are prepared to deal liberally for the founding of IRON AND WOOD-WORKING INDUSTRIES in this growing Mining and Manufacturing Center.

H. M. McNUTT, Secty.

WM. A. COURTENAY, President.



CAMDEN,

The Capital of Kershaw County,
South Carolina.

This ancient and historic town is noted for its dry atmosphere, pure water, beautiful scenery, healthful climate and refined society.

It is the center of a rich agricultural country, which contains great natural resources. Hardwoods of many species are abundant, and great forests of long leaf pine, which impregnate the air with terebenthine odors. Several good hotels entertain travelers, and two are carefully conducted for the especial comfort of northern health and pleasure seekers.

Manufacturing of all kinds can be done here advantageously. Two railroads, the South Carolina and the Charleston, Cincinnati & Chicago, furnish transportation to all parts of the country. Two telegraph lines, the Postal and the Western Union, have offices here.

Churches and schools are numerous and well sustained.

A cotton mill company has been organized, and the first installment of twenty per cent. has been called in.

Land is cheap. The climate is salubrious, and subject to no extremes during the year.

Camden invites capitalists, manufacturers, pleasure and health seekers and sportsmen to visit the city and examine the advantages it offers to all.

All inquiries will be promptly answered by the undersigned, official representative of the intendant and warders.

DR. JOHN W. CORBETT

Or the President of the Board of Trade.

GEO. T. McWHORTER, Prest., Chickasaw, Ala.
JAS. M. ALLEN, Secretary, Waterloo, Ala.

Capital Stock \$200,000.

THE WATERLOO Land, Mining & Mfg. Co.

WATERLOO, ALA.

(Lauderdale Co.)

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No matter what you intend to manufacture, consult the Waterloo Land, Mining & Manufacturing Co. and learn what facilities for the prosecution of your business the place enjoys and what inducements will be offered you to come. All questions truthfully and fairly answered. For further information consult the President, Secretary or Hon. Hiram Richardson, Vice-President, Waterloo, Ala.

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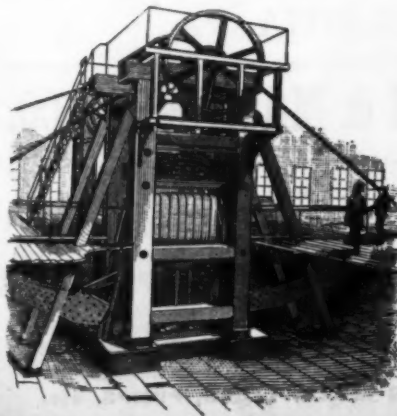
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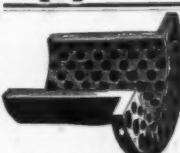
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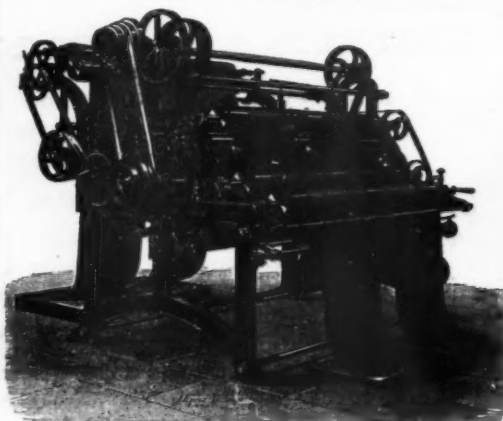


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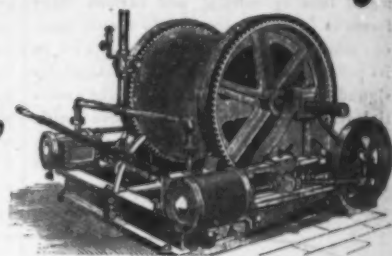
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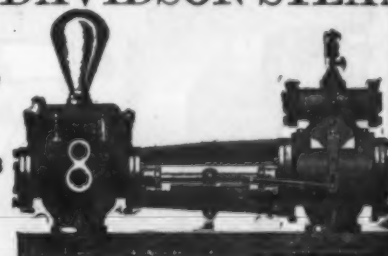
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A New Drawing Press.

While the principle of working sheet metal into cylindrical and various other forms is in itself exceedingly simple, various mechanical difficulties are met with in its practical application. All machines designed to do this work contain three essential features: a hollow die, whose inside form is that of the article to be drawn; a punch, or male die, which enters the other and presses into it the metal operated on, and a metallic ring, which surrounds the

called, is to hold the blank smooth and prevent wrinkling.

In all drawing presses, therefore, there are two distinct mechanical motions to be provided for. The lower, or hollow die, is generally secured to a stationary bed and the punch and blank-holder given the necessary motion, though occasionally a press is met with in which the blank holder is stationary and the lower die rises to it. This, however, is not good practice, as the machine is much less convenient for the operator.

rest with the full pressure exerted, while the punch comes down and does its work, and then to return to its upper position along with the punch, to enable the finished article to be removed from the die and a fresh blank to be inserted.

The obvious method of obtaining this action is by the use of a cam mechanism, and for many years this was the only method employed, but the pressure required to prevent wrinkles forming in the blank is so great that it is a very difficult matter to construct a cam and roll which will stand

having an aggregate width of face of 12 inches, the rolls against which the cams operated being made of cast steel, journal shafts 4 inches diameter, working in gun metal boxes, with an aggregate length of bearing of 20 inches, it has been impossible to prevent the bearings from cutting more or less, and the face of cams and rolls from giving way by crushing, so that repairs on the old style cam presses are frequently required.

The machine here shown is the development of the original mechanism designed by E. W. Bliss Co., in which the motion of the blank-holder is obtained by a novel system of link-work. The peculiarity of this device lies in the fact that the blank-holder is given an intermittent motion, the time of pause, or dwell, being about one-third; this motion being obtained by a system of link-work from a reciprocating cross-head driven by a continuously rotating crank-pin.

In building presses for larger work the practice heretofore has generally been to place the crank shaft and gearing in a pit below the die bed, on the plan known as the "Marchand."

By the arrangement here shown a great saving of material and expense is obtained over the other plan, amounting—both as regards weight of machine and cost of construction—to about 30 per cent. This is the only press of its size, as far as we know, where the main frame or housing has been cast in one piece, thus securing an amount of rigidity and compactness not to be had by the other method.

Not only is there a saving in the cost of the machine itself, but the expensive foundation and pit required in the old Marchand press is done away with, this machine being self-contained and requiring nothing more than a good, solid floor of sufficient strength to carry the dead weight.

The details may be described as follows:

The main frame or housing, cast in one piece, is provided with a planed bed at the bottom, on which the die rests. Two uprights, each with a section of 18 inches by 5 inches, serve to take the tensile strain produced in doing the work, and also to serve as guides for the blank-holder, and for carrying the various shafts and other attachments.

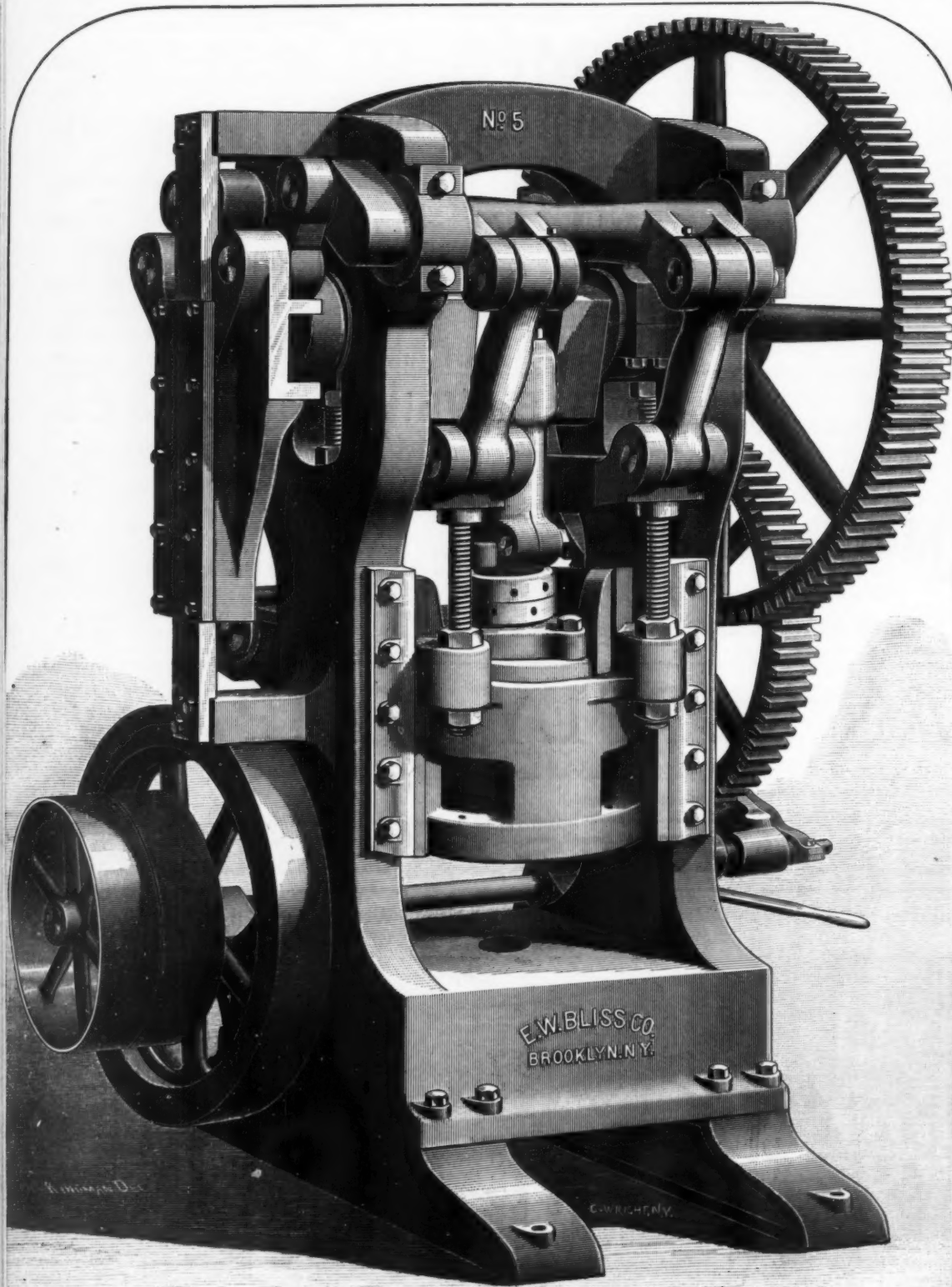
At the top of the frame are placed three pairs of journals, the center one carrying the main shafts and the other two the rock levers for working the blank-holders.

The main shaft is of hammered steel, forged from a single billet, and the crank slotted out. It is $7\frac{1}{2}$ inches diameter, with a throw of crank of 17 inches.

The cross-head, or plunger, to which the punch is attached, is guided in ways planed on the inside of the blank-holder slide, and is operated by a pitman for the main crank. This pitman has a steel adjusting screw, 5 inches in diameter, to regulate its length, which is held in the plunger by a ball and socket joint. The ball, forged on the end of the adjusting screw, is $7\frac{1}{2}$ inches diameter. Two collars are provided on the screw, in which are placed ratchet pawls, placed reversed ways, the collars having holes for the insertion of a round bar. By operating one collar or the other the pitman may be lengthened or shortened to give the required adjustment.

On the left-hand end of the crank shaft is placed a crank-disc having a steel crank-pin 6 inches diameter and 20 inches throw. This operates the outside cross-head, which is carried by a vertical wrought iron guide attached to lugs on the housings of the machine. The cross-head, therefore, has a reciprocating motion of 20 inches in a vertical direction.

Two links connect the upper part of this cross-head with arms on the rock-shaft before mentioned, imparting to them a vibrating motion. Between the uprights of the housing similar arms on the rock-shafts



A NEW DRAWING PRESS.

punch and presses the sheet of metal, or "blank," against the flat face of the hollow die, from between which two surfaces the blank is drawn as the punch strikes it and carries it into the die. If the punch and hollow die should be used alone it will readily be seen that the thin flat sheet of metal lying on the die would be at once doubled and crumpled up when the punch forced it into the hollow opening, and the function of the blank-holder, as the ring is

To obtain the motion necessary for the punch is a very simple matter, as nothing more is required than the reciprocating action of a cross-head driven by a crank on the main driving shaft of the machine. That required for the blank-holder, however, is more difficult to obtain. This results from the fact that it is necessary for the blank-holder to first quickly descend ahead of the punch, to press the blank firmly against the lower die, to remain at

the abuse; moreover, this pressure, being brought against the main shaft, causes frequent breakage of the latter, and, by reason of the pressure brought on the main journals and the rolls, causes great waste of power in friction.

An adequate idea of this great pressure may be had when it is stated that in drawing up articles of tin-plate in a press of the capacity of the one here illustrated, and in which two steel cams were used,

are connected by four links to two yokes extending front and back; and again, these yokes are connected by four $2\frac{1}{2}$ -inch steel screws with the blank-holder slide, thus imparting to it the necessary motion.

By examining the construction of the machine, it will be seen that when the out-

revolution. From actual calculation the vertical motion of the yokes and blank-holder slide at this time is one five-thousandth of an inch, which is far within the ordinary spring of the iron, and not the slightest trace of motion can be detected in the machine or from its results in the

holding-down screws pass through clearance holes in the lugs on the blank-holder slide and are provided with lock cuts as shown.

The driving mechanism consists of a train of gears placed at the back of the machine, the pulley shaft making 28 revolutions to one revolution of the main shafts. The large gear on the main shaft is six feet in diameter.

The machine is driven by a friction clutch, a lever operating which is placed in a convenient position for the operator to stop the machine instantly at any part of the stroke, and to insure prompt stoppage when the clutch is thrown out, the lever automatically applies a powerful brake to a brake-wheel provided on the pulley shaft.

In operation the main shaft makes nine revolutions per minute, which gives the operator ample time to remove the finished

which operates a knocking-out pad, which, at the proper time, lifts the finished work clear of the die, so that it may be easily and quickly removed by the operator.

The general dimensions of the machine, other than those mentioned above, are: Lift of blank holder, 12 inches; largest size of blank the press will take, 30 inches round or 30x36 inches oblong; total weight 30,000 pounds.

The Lion Dry Clay Brick Machine.

The accompanying engravings show two views of a mammoth dry clay press, weighing twenty-two tons, the heaviest machine it is said manufactured for brick-making excepting one.

The "Lion" press, as its name signifies, is noted for its great strength, power and durability; the pressure on each brick being forty tons. The working parts of the machine are very strongly constructed, and there is no spring or "give" under this working strain. One point of excellence for this machine is the simplicity and openness of the frame and construction, making every part accessible for inspection, adjustment and lubrication. Five brick are pressed at every revolution of the machine, keeping the regular force of off-bearers and setters fully employed. The Lion press can be quickly readjusted from common to stock-brick, at will, in a few minutes. There are several large Southern brick yards running with the Lyon brick machine, whose owners express themselves as "more than pleased with this particular machine."

The St. Louis Iron & Machine Works, of St. Louis, Mo., who are patentees and manufacturers of this machine, and a full and complete line of brick-making machinery and outfits, will be glad to answer any further questions concerning the Lion press.

This concern, besides their clay-working machinery, manufacture a very high-grade Corliss and slide-valve engines of various sizes, cotton compresses, elevators, hoisting travelers, plate-glass machinery, mining

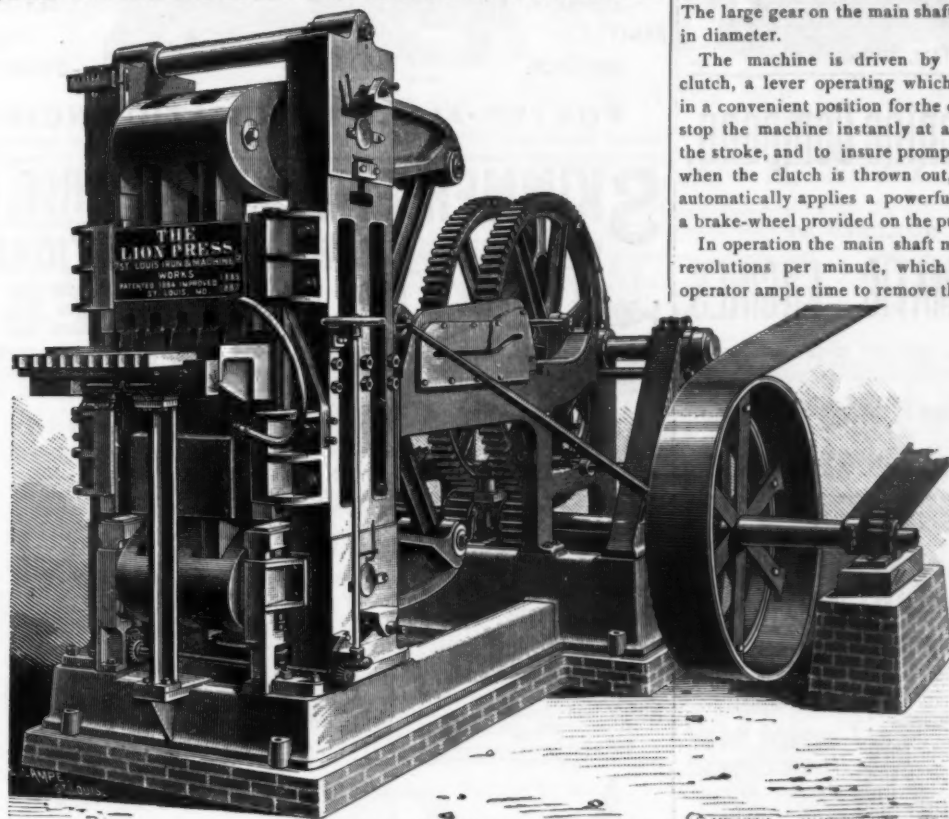


FIG. 1.—THE LION DRY CLAY BRICK MACHINE.

side cross-head is at the upper end of its stroke, the links connecting with the rock-shafts are in a position which gives very little motion to the rock-shafts.

As a matter of fact, while the crank is passing through one-third of its revolution, (one-sixth on each side of the vertical

work produced.

As the outer cross-head travels toward the lower end of its stroke, the arms on the rock shaft are drawn off the center, and the blank-holder raised. It will be seen from this construction that an enormous pressure can be obtained with little strain on the

work from the die and insert a fresh blank without stopping the press.

In order to facilitate the operation of removing the work from the die, an additional motion is supplied.

The crank disc on the outer end of the main shaft is cam-shaped. Against the

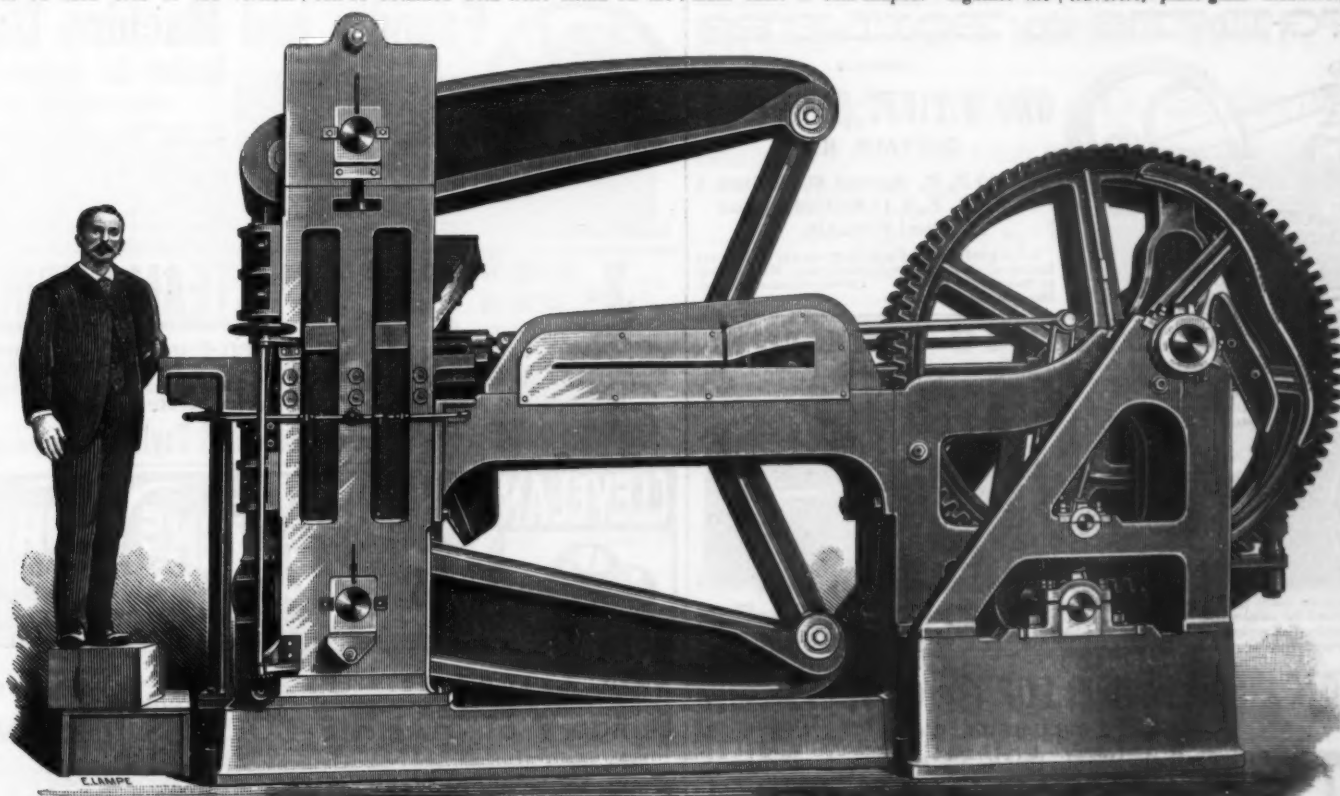


FIG. 2.—SIDE VIEW OF THE LION DRY CLAY BRICK MACHINE.

line), the motion imparted to the link-pins in the rock-shafts is only about 3-16 inches, and as in this position the links on the inside, attached to the yokes, are on the dead center, there is practically no motion of the yokes during this period of the

operating mechanism and no cause for wear and breakage, while at the same time, the pressure being taken off the shaft and journals, little power is lost through excessive friction. In order to regulate the pressure necessary to do the work, the

periphery of this cam is placed a roll carried by a vibrating lever attached to the main shaft. This lever imparts a motion to a rock shaft placed across the bottom of the machine, near the center of the press, and attached to this rock shaft is a lever

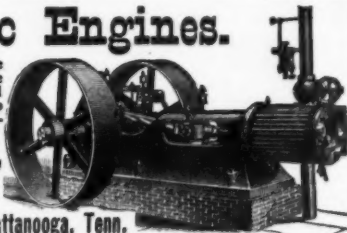
machinery, and a line of ice and refrigerating machinery, in sizes of 3, 12, 20, 25 and 35 tons capacity. The St. Louis Iron & Machine Works is one of the oldest machinery houses in the United States, having been established since 1854.

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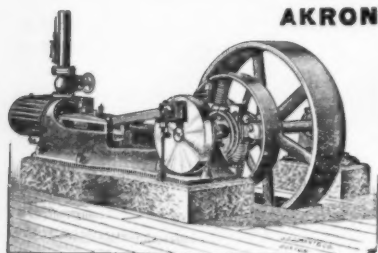
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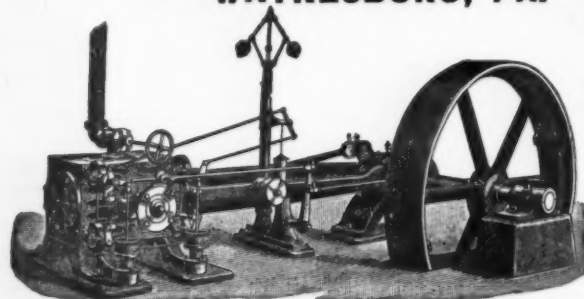
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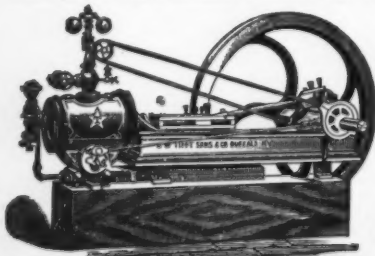
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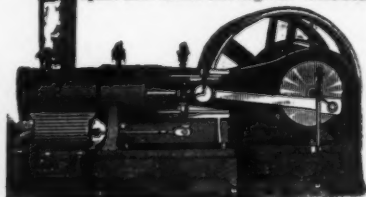
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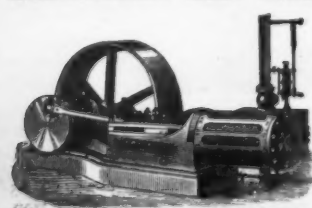


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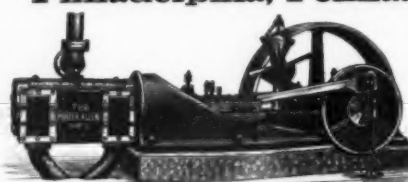
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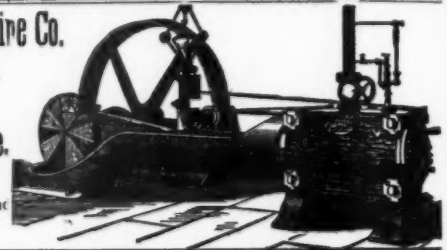
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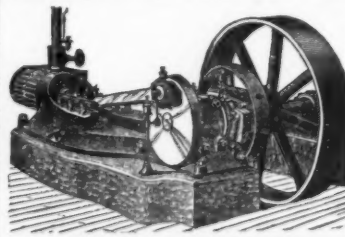
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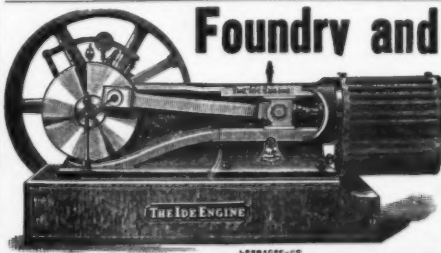
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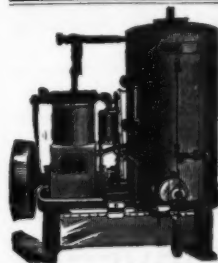
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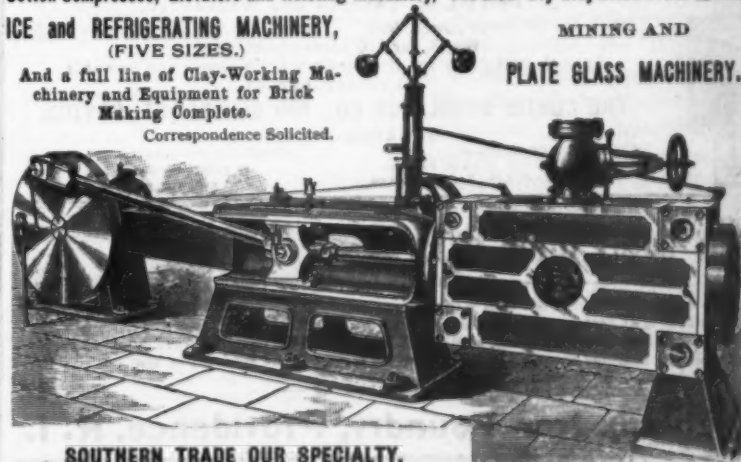
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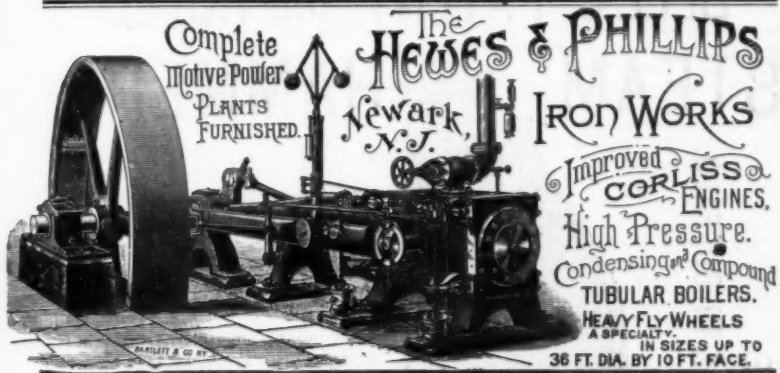
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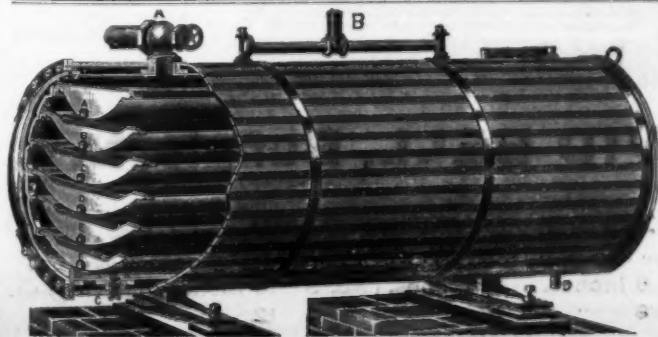
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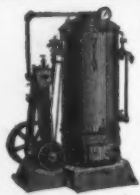
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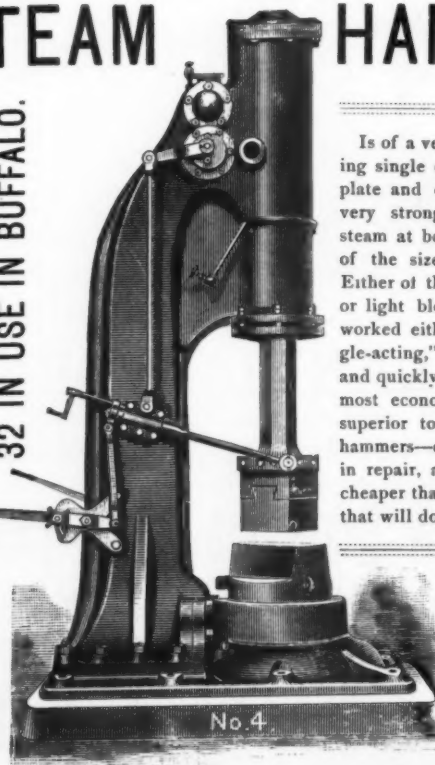
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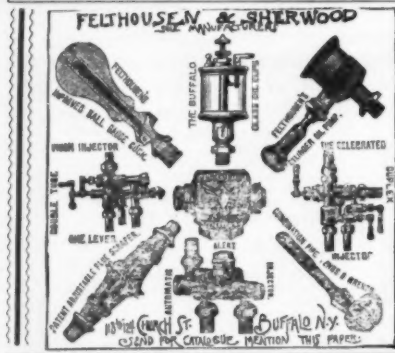


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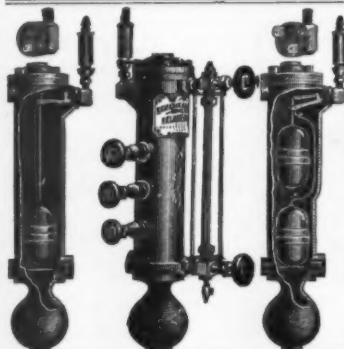
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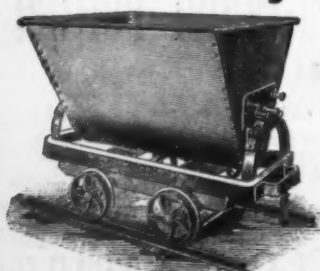
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Portable Track and Switches,

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Southern Railroads.

A DISPATCH from Pensacola says that "the Louisville & Nashville Railroad Co. will soon have an air line from Louisville to Pensacola, Fla. Having already tracks from Louisville to Blocton, Ala., via Birmingham, a road 60 miles in length, from Blocton south to Selma, will be constructed to connect with the upper division of the Pensacola & Selma Railroad, which extends from Selma to Pine Apple. From Pine Apple to Repton, the northern terminus of the Pensacola & Selma's lower division, is a distance of 20 miles, which will be tracked, thus making a through line to Pensacola, the Pensacola & Atlantic Railroad completing the connection from Pensacola to Flomaton, the southern terminus of the Pensacola & Selma Road."

Direct Line From Memphis to Pensacola by Rail.

PENSACOLA, FLA., Jan. 4, 1890.

Editor Manufacturers' Record:

A contract to build the Mexican Gulf, Pacific & Puget Sound Railroad Co., a direct line from Pensacola to the Mississippi river, to terminate near Memphis, Tenn., has been closed with the South & West Land Development & Railroad Construction Co. Arrangements have been made to commence grading early in February in Alabama, and when commenced will be continued until finished without interruption. This road is backed by ample capital in Pensacola and Alabama and Tennessee. It will be about 450 miles long, of standard gauge. S. W. Van Praag, secretary of the Chamber of Commerce, is the president and was the instigator of the project. To his untiring energy, it might be said, the project of building this road has proved to be under such successful operation towards its construction. I. M. Aiken is vice-president; J. H. Cross, secretary. This road will open a country where the timber has not as yet been touched by the woodman's axe. It is of many different varieties, including pine, oak, cypress, hickory, etc. It will traverse a rich cotton country, will pass through innumerable coal and iron beds and some of the finest lands for the cultivation of tobacco in the South. When completed this road will connect with twenty-seven railroad lines, among which will be the Louisville & Nashville, Mobile & Birmingham, Mobile & Ohio, the East Tennessee, Virginia & Georgia, the Alabama Great Southern, Georgia Pacific, Memphis & Kansas City, and Birmingham, Memphis & Tuscaloosa, Memphis & Charleston and others. This line when completed will give a short route to Birmingham, Louisville, Cincinnati, Memphis, Kansas City, Omaha and several other prominent cities from Pensacola.

THE Bankers' Edition of the Baltimore MANUFACTURERS' RECORD was a great newspaper. A resume of the contents of that publication would fail to do it justice. The paper should be read to be fully appreciated. THE MANUFACTURERS' RECORD is doing a wonderful work for the whole South. Its influence is constantly increasing, and the Herald hopes the good work which it is doing may be continued. It is just such publications as the MANUFACTURERS' RECORD that aids in building up and developing the South.—Fort Payne (Ala.) Herald.

Railroad Construction

Alexandria, Va.—Street Railroad.—A street railroad company has been incorporated by Harold Snowden, Beriah Wilkins, of Washington; F. L. Smith and others.

Arrington, Va.—Railroad.—It is stated that the Virginia Midland Railroad Co. (office, Alexandria, Va.) contemplates the construction of a 25-mile branch road to Hat Creek.

Anniston, Ala.—Electric Railway.—It is reported that the Anniston Street Railway Co. will adopt the electric system for their road.

Asheville, N. C.—Railroad.—H. M. Ramseur, chief engineer French Broad Valley Railroad Co., invites proposals until January 21 for the grading, trestle-work, bridges, etc., including cross-ties, for the first 30 miles of the French Broad Valley Railroad, lately reported. Address communications to C. G. Dyott, 52 Wall street, New York city, or H. M. Ramseur.

Averett, Va.—Railroad.—A route for a branch of the Atlantic & Danville Railroad (office, Danville) has, it is reported, been surveyed to Buffalo Lithia Springs, and it is stated that a line of road will be constructed shortly.

Blocton, Ala.—Railroad.—The Louisville & Nashville Railroad Co. (office, Louisville, Ky.) contemplates the construction of two lines of railroad, as reported in another column. The roads will extend from Blocton to Selma, a distance of 60 miles, and from Pine Apple to Flomaton, Ala., 20 miles south.

Brentsville, Va.—Railroad.—It is reported that a 4-mile railroad will be built to Bristol or Nokesville to connect with the Virginia Midland Railroad.

Cartersville, Ga.—Railroad.—The East & West Railroad Co. of Alabama will, it is said, extend its road 17 miles to a connection with the Marietta & North Georgia Railroad at Canton.

Charleston, W. Va.—Railroad.—The surveys of the proposed Ohio & West Virginia Southern Railroad have been finished. The road is to run from Marietta, O., to Clifton Forge, Va., via Harrisville and Troy, W. Va. The last-named place is the objective point at present.

Dallas, Texas.—Railroad.—The report is made that arrangements have been concluded for the laying of track on 70 miles of the Dallas Pacific & Southeastern Railroad. W. J. Sherman, chief engineer, can give information.

Denison, Texas.—Railroad.—It is reported that the Choctaw Coal & Railroad Co., previously mentioned, has been reorganized by Philadelphia capitalists with a capital stock of \$3,750,000. The company contemplates building a railroad 338 miles long from Western Arkansas to the eastern boundary of Northern Texas via Indian Territory, with a branch to Denison.

Denison, Texas.—Railroad.—The Missouri, Kansas & Texas Railroad Co. (office, St. Louis, Mo.) has decided to build a railroad to Sherman if \$40,000, the right of way, etc., are given.

Dyersburg, Tenn.—Railroad.—Dyersburg will hold an election for the purpose of voting on the question of appropriating \$35,000 for the construction of the Kansas City, Jackson & Birmingham Railroad.

Dyersburg, Tenn.—Railroad.—Two routes are to be surveyed for the Kansas City, Jackson & Birmingham Railroad, one by Gadsden, Ala., and Friendship, Tenn., to Newbern, Tenn., and the other via Crockett Mills, Tenn., to Dyersburg.

Eutawville, S. C.—Railroad.—A bill has been introduced into the South Carolina legislature to change the name of the Eutawville Railway Co. to the Charleston, Sumter & Northern Railway Co.

Eutawville, S. C.—Railroad.—The report of a railroad from Eufaula, Ala., to Monroe, N. C., via Darlington, is incorrect. The proposed road is to extend from Eutawville to Monroe.

Fort Worth, Texas.—Belt Railroad.—The Fort Worth & Albuquerque Railroad Co., which is reported as having contracted for 50 miles, has applied for a charter to build a 9-mile belt railroad around the city of Fort Worth.

Fort Worth, Texas.—Street Railway.—The Park Street Railway Co. has been incorporated by J. J. Poche, C. V. McClellan, Martin Casey and others; capital stock \$50,000.

Fort Worth, Texas.—Street Railway.—It is reported that the Chamberlain Investment Co., mentioned elsewhere in this issue, will build a 5-mile street railway through property being improved.

Henderson, Ky.—Belt Railroad.—An ordinance for the building of a belt railroad has been passed by the Henderson city council.

Hopkinsville, Ky.—Railroad.—A movement is being made to issue \$100,000 of bonds voted to the Ohio Valley Railway Co. (office, Evansville, Ind.) in order to secure another railroad.

Hot Springs, N. C.—Railroad.—A charter for the railroad lately reported has been applied for.

Houston, Texas.—Railroad.—It is reported that the Houston, East & West Texas Railway Co. will construct a 10-mile road from Teneha to Center. Surveys are being made.

Knoxville, Tenn.—Railroad.—It is reported that the East Tennessee, Virginia & Georgia Railway Co. will build a large number of additional side-tracks on its line between Knoxville and Bristol.

Knoxville, Tenn.—Street Railway.—Track-laying on the Fountain Head Railway will, it is stated, begin about February 1.

Lexington, Va.—Railroad.—The Pittsburg & Virginia Railroad, to extend from Pittsburg, Pa., to Lexington, Va., will, it is stated, be constructed at once. Ex Governor Fitzhugh Lee is president of the company.

Little Rock, Ark.—Railroad.—The Houston, Arkansas Central & Northern Railway Co. has been incorporated with a capital stock of \$2,500,000 by Guy Phillips, of New York; E. G. Merriam, St. Louis; George E. Dodge, Little Rock; Charles E. Buckner, Dermott, Ark., and others.

Little Rock, Ark.—Railroad.—The Arkansas & Gulf Railroad Co., mentioned last week as reorganized, has made its surveys, is completing its final location and will construct its road during 1890. W. R. Bergholz, 15 Cortlandt street, New York city, can give information.

Memphis, Tenn.—Railroad.—The city of Memphis and the Memphis & Atlantic Railroad Co., lately mentioned, have negotiated a contract by which the latter corporation agrees to build its road to Columbus, Miss., within two years' time.

Memphis, Tenn.—Railroad.—The contract for the construction of the Raleigh Springs Railroad, previously reported, has been awarded to C. J. Wagner & Co.

Memphis, Tenn.—Railroad.—It is reported that the Memphis & Charleston Railroad Co. will construct 10 miles of side-tracks.

Meridian, Miss.—Railroad.—It is rumored that a 45-mile railroad to deep water on the Tombigbee river may be constructed.

Mobile, Ala.—Railroad.—C. C. Merrick, of the Gulf & Chicago Railroad Co., previously reported, is now in England to secure capital for the construction of this road.

Mobile, Ala.—Dummy Railroad.—It is reported that the Spring Hill Railroad Co. will extend its line.

Nashville, Tenn.—Railroad Consolidation.—A meeting will be held on February 26 to consider terms of consolidation of the City Electric Railway Co., the Main Street & Lichey Avenue Street Railway Co., the United Electric Railway Co. and the McGavock & Mt. Vernon Horse Railroad Co.

Nashville, Tenn.—Street Railway.—The Rapid Transit Street Railway Co. contemplates the extension of its line.

Parkersburg, W. Va.—Railroads.—The West Virginia Improvement Co., reported elsewhere in this issue as incorporated, is privileged to construct railroads.

Pensacola, Fla.—Street Railway.—It is reported that another street railway is to be built.

Pensacola, Fla.—Railroad.—The Mexican Gulf, Pacific & Puget Sound Railroad Co., previously reported, has been incorporated with a capital stock of \$200,000 by S. N. Van Praag, J. H. Cross, I. M. Aiken and others.

Redtop, Miss.—Tram-road.—J. P. Davis is building a tram-road to be operated in connection with his saw mill.

Roanoke, Va.—Street Railroad.—The Citizens' Street Railway Co. is being organized by H. S. Trout, J. H. Sands, D. W. Flickwir, P. L. Terry, J. A. Jamison, J. M. Gambill, W. E. Bibb, James S. Simmons and E. H. Stewart; capital stock not less than \$10,000 or more than \$100,000.

Rowlesburg, W. Va.—Railroad.—It is stated that the Preston County Mineral & Development Co. has the contract for grading a railroad from Rowlesburg to Uniontown.

Savannah, Ga.—Railroad.—The Savannah, Florida & Western Railroad Co. denies that it will double-track its road from Southover to Central Junction.

Sherman, Texas.—Railroad.—Surveys have been begun on the proposed Sherman, Ardmore & Denver Railroad.

Texarkana, Texas.—Railroad.—Grigsby Bros., of Atlanta, Texas, are said to have received the contract for building 15 miles of the Texarkana & Northern, to extend from Texarkana to Fort Smith, Ark.

Texarkana, Ark.—Railroad.—A railroad 9 miles long is included in the sale of the mill property of J. S. Matthews to J. H. Bemis and W. S. Whitaker, mentioned elsewhere in this issue.

Thomasville, Ga.—Railroad.—Morgan & Reynolds have received the contract for building the branch of the Georgia Southern & Florida Railway Co. (office, Macon, Ga.) from Tifton to Thomasville, previously reported.

Valdosta, Ga.—Railroad.—The Georgia & Florida Construction Co. has been organized to build

the Florida Midland & Georgia Railroad to Madison, Fla.

Vidalia, La.—Railroad.—The New Orleans, Natchez & Fort Scott Railroad Co. and the New Orleans & Northwestern Railroad Co. have been consolidated under the latter company's name. John H. Rice is president.

Waycross, Ga.—Railroad.—The extension of the Atlanta & Florida Railroad (office, Atlanta, Ga.), previously reported, to Waycross, is being considerably agitated.

West Point, Miss.—Railroad.—The Memphis & Atlantic Railroad Co. contemplates issuing bonds to secure funds for the construction and equipment of its road from Memphis, Tenn., to Tusculum, Ala.

Delaware's Southern City.

THE MANUFACTURERS' RECORD has from time to time announced the founding of many new industrial towns, but rarely have we had the pleasure of giving publicity to the projection of a more well-rounded and well-planned enterprise of this character than the one described to-day by our special correspondent, Mr. Grasty. Piedmont is the name of the new candidate for public favor, and as Delaware capitalists have invested so heavily in it, and as a leading Wilmington manufacturer and capitalist is president of the company, it is appropriate to call it Delaware's Southern City, for doubtless it will be as great a favorite with Delawareans as Fort Payne is with New Englanders.

The whole enterprise has been planned on a broad basis, and the arrangements were completed for laying out a town at a most desirable point in every respect, and the money secured for building furnaces, a rolling mill, car-wheel works and other enterprises before a hint of the enterprise was given to the public. Of the location of Piedmont and the many attractions possessed our correspondent gives some very interesting particulars. We may add that it is in the heart of one of the richest iron ore regions of America.

The late Samuel Noble, of Anniston, one of the ablest iron makers that this country has ever produced, who founded the Woodstock and Clifton Iron companies, stated to the editor of the MANUFACTURERS' RECORD a few months before his death that the finest high-grade iron ore properties which he had ever seen in all his investigations were in what he called the Cedar-town district, Cedartown being a few miles east of Piedmont; and in that district he bought very heavily shortly before his death, and the ores from there pass directly by Piedmont on their way to the Anniston coke furnaces. This location was selected years ago as one of the most desirable that could be found for an industrial town, but an unfortunate event prevented the carrying out of the plans that had been partly matured. A few months ago one of the most successful of Anniston's financial corporations secured the situation and offered to Northern friends an interest in the scheme. Out of the dozen gentlemen who were offered stock in the Piedmont Company, we learn that not a one failed to respond favorably. So great was the confidence placed in

the judgment of the Ledbetter Company, of Anniston, who have been the promoters of Piedmont, that the subscriptions from a distance exceeded the proposed capitalization by several hundred thousand dollars.

The principal takers of the million and a-quarter of Piedmont stock were Delaware men, headed by Preston Lea, of Wilmington. Mr. Swann, of Inman, Swann & Co., of New York, is also heavily interested, as is also Mr. Geo. O. Vanderbilt, of Trenton, New Jersey. Mr. Lea has a great following among business men generally, as well as in financial circles. The plan of improvement will, under Mr. Lea's direction, be based on the most improved business methods. His acceptance of the presidency guarantees an able management of Piedmont.

The local management of Piedmont will be in the hands of the Ledbetter & Co. Land & Loan Association, of Anniston, and the experience that the members of this association has gained by long residence in Anniston, and their active part in building up that town, will prove invaluable in the development of Piedmont. As the MANUFACTURERS' RECORD has known these gentlemen long and favorably, it congratulates the stockholders from Delaware and New York on the assurance that the local management of their investment will be vigorously and ably handled.

Southern Financial News.

NEW BANKS.

Alexandria, Va.—The Northwestern Investment Co. has been organized.

Anniston, Ala.—It is reported that a national bank with capital stock of \$100,000 is to be organized.

Bloomfield, Ky.—S. F. Wilkinson is said to be agitating the establishment of the bank previously reported.

Bellville, Texas.—It is reported that a national bank is to be opened and that contracts for construction of vault has been let, but it is possible that this bank is the same one reported recently at Beeville.

Birmingham, Ala.—The City National Bank, with a capital of \$200,000, has been established. Steiner Brothers' bank has increased its capital from \$100,000 to \$125,000.

Bowling Green, Ky.—It is reported that W. F. Whitesides will start a bank.

Bristol, Tenn.—The Merchants' Exchange Bank is the name of the institution reported recently as being organized.

Cocoa, Fla.—It is stated that the Brevard County State Bank will soon be organized.

Franklin, Tenn.—It is reported that a new bank is to be started.

Glasgow, Va.—A new banking enterprise is to be started. Alexander Bruce can give information.

Greer's Depot, S. C.—The establishment of a bank is being agitated.

Hartford, Ky.—The Bank of Hartford has increased its capital to \$30,000.

Jacksonville, Fla.—The Jacksonville Dime Savings Bank has been incorporated with W. B. Clarkson as president.

Kington, Tenn.—The Kingston Bank & Trust Co. has been organized with Hugh Martin, president, and S. P. Sparks, cashier.

Knoxville, Tenn.—The Knoxville Savings & Development Co. has been incorporated by Wm. Caswell, E. P. King and others. The Central Savings Bank has also been incorporated by W. L. Russell, F. A. R. Scott and others.

Nashville, Tenn.—It is reported that W. M. Duncan will open a private bank.

Pendleton, S. C.—The Farmers' Bank of Pendleton has been incorporated with a capital stock of \$100,000. David G. McClung, John McClure and others are among the incorporators.

Piedmont, Ala.—A bank has been organized with \$100,000 capital. The Piedmont Land & Improvement Co. can give information.

Pocomoke City, Md.—The Pocomoke City National Bank has been organized with a capital of \$50,000.

Savannah, Ga.—The Germania Savings Bank is being organized by Henry Blum, G. W. Owens, and others.

Sutton, W. Va.—The Sutton Bank has been incorporated by G. W. Curtin, G. S. Hyer and others; capital stock \$100,000.

Winston, N. C.—It is rumored that another bank will soon be organized.

Aiken, S. C.—The Bank of Aiken has declared a dividend of 4 per cent.

Alexandria, Va.—The Old Dominion Building & Loan Association has declared a dividend of \$7 per share; the Mount Vernon Building Association, one of \$2.75 per share; the Mechanics' No. 1, a dividend of \$4.90 a share; No. 2, of \$1.25 a share; No. 3, \$3.30 a share; the German Building Association No. 3, a dividend of \$12 per share; No. 4, \$3.25 per share; the First National Bank, a dividend of 2½ per cent., and the Citizens' National Bank, one of the same amount.

Anniston, Ala.—The \$250,000 of bonds of the Anniston Water Works, and \$150,000 of the Anniston Pipe Works, previously reported to be issued, have, it is stated, been sold.

Augusta, Ga.—The National Bank of Augusta has declared a dividend of \$3.00 per share; the Commercial Bank, a semi-annual dividend of 2 per cent.; the Graniteville Factory, a 5 per cent. semi-annual dividend.

Baltimore, Md.—The American Fire Insurance Co. has declared a semi-annual dividend of 4 per cent.; the Peabody Fire Insurance Co., a dividend of 5 per cent.; the George's Creek Coal & Iron Co., a semi-annual dividend of \$3.00 per share; the German Fire Insurance Co., a semi-annual dividend of 5 per cent.; Home Fire Insurance Co., a semi-annual dividend of 5 per cent.; the Maryland Fire Insurance Co., a semi-annual dividend of 3 per cent.; the Associated Firemen's Insurance Co., a 4 per cent. semi-annual dividend; the National Union Bank, a semi-annual dividend of 3½ per cent.; the Western National Bank, a 4 per cent. dividend.

Belair, Md.—The Harford National Bank has declared a semi-annual dividend of 6 per cent.

Bowling Green, Ky.—The Warren Deposit Bank has declared a dividend of 4 per cent.

Centerville, Md.—The Centerville National Bank has declared a 5 per cent. semi-annual dividend.

Charleston, S. C.—The Charleston Gas Light Co. has declared a dividend of 75 cents per share; the First National Bank, a dividend of 5 per cent.; the Palmetto Dime Savings Bank, a dividend of \$3 per share; the Germania Savings Bank, a dividend not stated; the South Carolina Loan & Trust Co., a dividend of \$2.50 per share; the Central Railroad Co. of South Carolina, a dividend, per cent. not stated; the City Railway Co., a dividend of \$1.50 per share; the American Savings Bank, a dividend of 10 per cent.; the People's National Bank, a dividend of \$5 per share; the Bank of Charleston, a dividend of \$3.50 per share; the Pelzer Manufacturing Co., a dividend of \$5 per share; the Security Savings Bank, a dividend of 3 per cent.

Charlotte, N. C.—The Commercial National Bank has declared a dividend of 4 per cent.

Charlottesville, Va.—The People's National Bank has declared a dividend of 4 per cent.

Chattanooga, Tenn.—John A. Hart, mayor, will receive sealed bids until February 4 for the purchase of \$50,000 of 20-year 6 per cent. sewer bonds of the city of Chattanooga.

Columbia, S. C.—The Commercial Bank has declared a dividend of 3½ per cent.

Columbus, Ga.—The Merchants & Mechanics' Bank, the Chattahoochee National Bank and National Bank of Columbus have each declared a dividend of 5 per cent.

Cordele, Ga.—The Bank of Cordele has declared a semi-annual dividend of 5 per cent.

Covington, Ky.—The German National Bank has declared a 4 per cent. semi-annual dividend; the Cottage Building Association No. 2, a dividend of the same amount.

Danville, Va.—The Commercial Bank has declared a dividend of 6 per cent., and the Merchants' Bank a dividend of the same percentage.

Fincastle, Va.—The Bank of Fincastle has declared a semi-annual dividend of 4 per cent.

Fort Valley, Ga.—The Fort Valley Exchange Bank has declared a dividend of 10 per cent.

Fort Smith, Ark.—The Board of Improvement of Paving District No. 1 will receive proposals until January 20 for the purchase of \$100,000 of 6 per cent. bonds, to be redeemed in 1910. J. H. Hoffman can give information.

Frankfort, Ky.—The Deposit Bank has declared a 3 per cent. semi-annual dividend.

Frederick, Md.—The Franklin Savings Bank has declared a dividend of 3 per cent., and the

Frederick-Town Savings Institution one of 3 per cent., with an extra dividend of 1 per cent.

Gainesville, Fla.—Gainesville has refused to issue bonds for the purpose of redeeming the present outstanding city script.

Greenville, S. C.—The Greenville Savings Bank has declared dividend No. 3.

Hopkinsville, Ky.—An effort is being made to issue \$100,000 of bonds, which were voted to the Ohio Valley Railroad Co. some time ago.

Houston, Texas.—The Houston Belt & Magnolia Park Railway Co. has authorized a mortgage on its property to secure the issue of bonds, not to exceed \$10,000 a mile.

Knoxville, Tenn.—The city of Knoxville will redeem 6 per cent. bonds to the amount of \$76,600, and will issue \$54,000 of 4 per cent. bonds to run until January 1, 1920.

Lexington, Va.—The Bank of Lexington has declared a dividend of 5 per cent. for the past six months.

Liberty, Va.—The Liberty Woolen Manufacturing Co. has declared a dividend of 3½ per cent.

Little Rock, Ark.—H. M. Payson & Co., of Portland, Me., offer for sale \$100,000 of 6 per cent. City of Little Rock bonds.

Louisville, Ky.—The following dividends have been declared: By the German Security Bank, a semi-annual dividend of 5 per cent.; by the Louisville Germania Insurance Co., of 4 per cent.; by the Dime Savings Bank, a semi-annual dividend of 3 per cent.; by the New Albany Street Railway Co., a semi-annual dividend, per cent. not stated; by the Louisville Safety Vault & Trust Co., one of 4 per cent.; by the Louisville Banking Co., one of 4 per cent.; by the Western Insurance Co., one of 4 per cent.; by the Fourth National Bank, one of 3 per cent.; by the Merchants' National Bank, one of 4 per cent.; by the Kentucky Title Co., one of 3 per cent.; by the Third National Bank, a semi-annual dividend of 4 per cent.; by the Western Insurance Co., one of 4 per cent.; by the German Insurance Bank, one of 4 per cent.; by the German Insurance Co., one of 3 per cent.; by the Masonic Savings Bank, one of 4 per cent.; by the People's Bank of Kentucky, one of 3 per cent.; by the Westview Building Co., a dividend of 10 per cent.; by the German Bank, a 9 per cent. semi-annual dividend; by the Louisville & Nashville Railroad Co., a semi-annual dividend of 3 per cent.

Lynchburg, Va.—The National Exchange Bank has declared a dividend of 5 per cent.; the People's National Bank, a dividend of 4 per cent.; the Lynchburg National Bank, a dividend of 5 per cent.; the First National Bank, a dividend of 5 per cent.; the Commercial Bank, a dividend of 4 per cent.; the Lynchburg Gas Light Co., a dividend of 5 per cent., and the Virginia Investment Co., a dividend of 5 per cent.

Macon, Ga.—The Central Georgia Bank has declared a semi-annual dividend of 3 per cent.; the Macon Construction Co., an annual dividend of 10 per cent.

Marion, S. C.—The Marion Fair Association has declared a dividend of 7 per cent.

Maysville, Ky.—The Bank of Maysville has declared a dividend of 5 per cent.

Montgomery, Ala.—The Bank of Montgomery has declared a dividend of 8 per cent.

Natchez, Miss.—The First National Bank has declared a semi-annual dividend of 3½ per cent.

New Orleans, La.—The following dividends have been declared: By the New Orleans City & Lake Railroad Co., a quarterly dividend of \$1.50 per share; by the Germania National Bank, a semi-annual dividend of 5 per cent.; by the Whitney National Bank, one of 4 per cent.; by the Hibernia National Bank, one of 5 per cent.; by the New Orleans National Bank, a semi-annual dividend of \$15 per share; by the State National Bank, a 3 per cent. semi-annual dividend; by the Crescent City Live Stock, Landing & Slaughter House Co., a semi-annual dividend of 5 per cent.; by the Mutual National Bank, a 4 per cent. semi-annual dividend; by the Bank of Commerce, a dividend of 3 per cent.; by the Orleans Railroad Co., a dividend of 2 per cent.

Newport, Ky.—The German National Bank has declared a dividend of 4 per cent., and the First National Bank one of 4 per cent.

Paris, Ky.—The Agricultural Bank has declared a semi-annual dividend of 5 per cent.; the Deposit Bank, 3 per cent.; the Citizens' Bank, 4 per cent., and the Cynthiana National Bank a dividend of 5 per cent., with 4 per cent. for reserve fund.

Petersburg, Va.—The National Bank has declared a dividend of 3 per cent.

Raleigh, N. C.—A dividend of 5 per cent. has been declared in favor of the creditors of the State National Bank.

Richmond, Va.—The Old Dominion Steamship Co. has declared a dividend of 3 per cent.; the Virginia Fire & Marine Insurance Co., a semi-annual dividend of 5 per cent.; the National Bank, of Virginia, a dividend of 3 per cent.; the Richmond Perpetual Building, Loan & Trust Co., a 5 per cent. dividend; the First National Bank, a dividend of 5

per cent.; the State Bank of Virginia, a dividend of 3 per cent.; the Virginia State Insurance Co., a 3 per cent. semi-annual dividend; the City Bank of Richmond, a 3 per cent. semi-annual dividend; the Planters' National Bank, a dividend of 4 per cent.; the Guarantee Building, Loan & Trust Co., a dividend of 4½ per cent.; the Union Bank of Richmond, a 4 per cent. dividend; the Citizens' Bank, a 3 per cent. semi-annual dividend; the Merchants' National Bank, a dividend of 3½ per cent.

Rome, Ga.—The First National Bank has declared a dividend of 6 per cent.

Savannah, Ga.—The Southern Bank of Georgia has declared a semi-annual dividend of 6 per cent.; the Merchants' National Bank, a dividend of 4 per cent.; the National Bank of Savannah, a semi-annual dividend of 3 per cent.; the Savannah Bank & Trust Co., a semi-annual dividend of \$3.00 per share; the Savannah Brewing Co., a dividend of 5 per cent.

Selma, Ala.—The Central City Insurance Co. has declared a semi-annual dividend of 4 per cent.; the Commercial Bank of Selma, one of 5 per cent.

St. Michael's, Md.—The Workmen's Building & Loan Association has declared a dividend of 3 per cent.

Suffolk, Va.—The Farmers' Bank of Nansemond has declared a semi-annual dividend of 5 per cent.

Union, S. C.—The town of Union contemplates issuing \$7,000 of bonds for the purpose of erecting a schoolhouse.

Washington, D. C.—The Washington Market Co. has declared a dividend of 35 cents per share.

Westminster, Md.—The Union National Bank has declared a semi-annual dividend of 5 per cent.

Wheeling, W. Va.—The Peabody Insurance Co. has declared a dividend of 4 per cent.; the Mutual Savings Bank, a 4 per cent. annual conditional dividend.

Wilmington, N. C.—The Wilmington & Weldon Railroad Co. has declared a dividend of 4 per cent.

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Richmond Stock Exchange Quotations.

Reported by JOHN L. WILLIAMS & SON, Bankers, Richmond.

RICHMOND, VA., Jan. 7, 1890.

	BID.	ASKED.
North Carolina 4's, 1910.....	95	99
North Carolina 6's, 1919.....	124	126
Virginia New 3's, 1932.....	66½	67½
Lynchburg, Va., 5's, 1915.....	104	105
Petersburg, Va., 5's, 1918.....	103½	104
Norfolk, Va., 5's, 1911.....	104	105
Richmond, Va., 5's, 1922.....	110	111
Atlanta & Charlotte Ry., 1st 7's, 1907.....	119	120
Atlanta & Charlotte G'd 6's, 1900.....	104	105
Char., Col. & Aug. R. R. Gen. 6's, 1932.....	109	110
Georgia Pacific Ry. 1st 6's, 1922.....	110	112
Georgia Pacific 2d 5's, 1923.....	80	80½
Ga. Pacific Incomes, 5's.....	31	31
Petersburg Railroad Class A 5's, 1926.....	102	103
Petersburg Railroad Class B 5's, 1926.....	107	108
Rich. & Danville R. R. Gold 6's, 1915.....	113½	114
West. N. Car. R. R. Gen. 6's, 1914.....	99	99
Northwestern N. Car. R. R. 1st 6's.....	101½	102
Atlanta & Charlotte R. R. Stock.....	89	90½
North Carolina Railroad Stock.....	101	104
R. F. & Pot. R. R. Div'd Obligations.....	107	108½
Virginia Midland Railway Stock.....	37½	40½
Sloss Iron & Steel Co. Stock.....	64	65
Sloss Iron & Steel Co. 1st 6's.....	95½	96
Sloss Iron & Steel Co. 2d 6's.....	75	76

Baltimore Stock Exchange Quotations.

Reported by ALEXANDER BROWN & SONS, Bankers, Baltimore.

BALTIMORE, Jan. 9, 1890.

	BID.	ASKED.
Virginia 6's Consols.....	40	41
Virginia 3's, new.....	66	67
Virginia Consul Coupons, N. F.....	20	21
Virginia 10-40 Coupons, N. F.....	30	31
N. Carolina 4's.....	56	57
Ga. Car. & N. S's.....	102½	103½
Cin. Wash. & B. Income 1st 5's.....	13	14
Va. & Tenn. 8's.....	126	127
Wil. & Wel. Gold, 7's.....	114	115
Wil. & Wel. 5's.....	110	111
Wil. Col. & Aug. 6's.....	120	121
Atlanta & Char. 1st 7's.....	120	121
Atlanta & Char. Income 6's.....	104½	105
Va. Midland, 3d 5's.....	111	112
Va. Midland, 5th 5's.....	100½	101
Char., C. & Aug. 1st 7's.....	109	110½
West Va. Central 1st 6's.....	108	109
Ga. Pacific 2d 5's.....	80½	81
West Nor. Car. Cons'd 6's.....	98	99
Cape Fear & Y. Valley 6's, A.....	103½	104
Cape Fear & Y. Valley 6's, B.....	101½	102

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For subscription blanks apply to E. A. Catlin, Secretary and Treasurer; S. G. Wallace, Cashier Citizens' Bank, or to W. M. Hill, Cashier State Bank, Richmond, Va., to any of whom subscriptions may be paid.

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# CONSTRUCTION DEPARTMENT.

**WE PUBLISH, every week, a list of every new factory, of whatever kind, projected anywhere in the South; every railroad undertaken, and every mining company organized. This information is always fresh, and, by enabling manufacturers to correspond with the projectors of such enterprises before their supplies of machinery have been purchased, is of great value. Manufacturers will find it to their interest to read this department carefully each week.**

\*Means machinery is wanted, particulars of which will be found in "Machinery Wanted" columns.

In correspondence relating to matters reported in this paper, it will be a favor if it is stated that the information was gained from the MANUFACTURERS' RECORD.

## ALABAMA.

Anniston—Canning Factory.—Efforts will probably be made to erect a canning factory.

Anniston—Printing Office.—Additional machinery has been put in the News Job Printing Office.

Anniston—Machine Works.—The stock company mentioned in last issue as being organized to secure the removal of the Rollstone Machine Works from Fitchburg, Mass., to Anniston, has completed its organization with G. L. Stearne, president and general manager; R. H. Cobb, vice-president, and S. E. Cassine, secretary and treasurer. A site 280x150 feet has been selected. The capital stock is \$50,000 and the works will employ about 40 hands. Will manufacture wood-working machinery.

Anniston—Stove Works.—The establishment of stove works is projected. R. H. Cobb can give information.

Attala—Jere Haralson, John Dobbs and others, of Fort Payne, have formed a company for the purchase of land.

Birmingham—Publishing.—A \$100,000 stock company will probably be organized with Thomas Seddon as president and R. N. Rhodes as general manager, to publish a daily paper.

Birmingham—Iron Furnace.—The officers of the Mary Lee Coal & Railroad Co. are negotiating with Northern men for the building of a 150-ton furnace, previously reported as contemplated, near the company's mines.

Birmingham—Iron Furnace.—The Tennessee Coal, Iron & Railroad Co. has put in blast its Alice iron furnace No. 2 after repairing as previously reported.

Bridgeport—Water Works.—The Bridgeport Land & Improvement Co. will receive proposals for constructing water works.

Bridgeport—Plow Factory.—A site for the plow factory lately mentioned has been secured. The capital stock is \$100,000. The Bridgeport Land & Improvement Co. can give particulars.

Bridgeport—Factories.—The Bridgeport Land & Improvement Co. has increased its capital stock to \$5,000,000, as stated in last issue, and appropriated \$600,000 to secure the establishment of new factories.

Bridgeport—Cotton Mill.—The stock company reported in last issue as organized by the Bridgeport Land & Improvement Co. to erect a cotton mill has a capital stock of \$400,000.

Brierfield—Iron Furnace.—The Alabama Iron & Steel Co. is repairing its Bibb coke iron furnace.

Calera—Publishing.—J. A. Campbell will publish the newspaper lately mentioned.

Columbiana—Coke Ovens.—The coke ovens lately reported as being built by J. S. De Lache, near Columbiana, were for the Shelby Iron Co., of Shelby.

Florence—Brick-yard.—Hewers & McIhofer will start a brick yard to have a daily capacity of 30 M brick.

Elmore.—It is reported that a large steam saw mill will soon be erected.

Florence—Box and Implement Factory.—Mr. Stevenson, of Hartselle, will erect a building 48x25 feet for the manufacture of his patent egg box and agricultural implements.

Fort Payne—Sewerage System.—R. F. Hartford, C. E., of Chattanooga, Tenn., is preparing plans for the sewerage system lately mentioned.

Fort Payne—Wheel Factory, etc.—C. H. Gifford contemplates starting a hub, spoke, handle and wheel factory.\*

Gadsden.—The Board of Trade has been organized with J. R. Nowlin, president, and S. W. Berger, secretary.

Ironaton—Publishing.—Dr. J. J. Hunter will publish the News.

Mobile—Electric-light Plant.—The Mobile Electric Light Co. is reported as putting in a 125 horse-power boiler.

Mobile—Paving.—Contract for cleaning and paving the streets for a term of five years, lately mentioned, has been awarded to the Improved Wood Pavement Co. at \$21,000 per annum. The company agrees to lay 5,500 square yards of wooden or brick pavement each year of contract.

Mobile—Brick Works, etc.—The Mobile Land & Construction Co. has been incorporated by Robert Gage, J. H. Turner and S. B. Fallen, of St. Louis, Mo., for the establishment of a sewerage system and to construct and operate water works, dry-docks, electric-light plant and brick works. Machinery for brick works has, it is stated, been ordered. The capital stock is \$20,000.

Mobile—Dry-dock.—J. C. Clarke, of the Mobile & Ohio Railroad, is president; A. C. Danner, vice-president, and Henry Hannaw, secretary and treasurer, of the Gulf Dry Dock Co., lately mentioned as to construct a dry-dock.

Montgomery—Cotton Mills, etc.—The Montgomery Real Estate Agents' Association has appointed M. C. Burke to visit Northern cities to induce capitalists to invest money in cotton mills and other manufacturing industries in Montgomery.

Newcastle—Coal Mines.—The Milner Coal & Railroad Co. has put in place a new set of boilers and engine at its coal mines.

Piedmont—New Town, Furnaces, Rolling Mill, etc.—The company previously mentioned as optioning land in and around Piedmont with a view to building an industrial town has been organized as the Piedmont Land & Improvement Co., with Preston Lea, of Wilmington, Del., as president; W. G. Ledbetter, of Anniston, vice-president, and R. D. Conso, also of Anniston, secretary and treasurer. The company has purchased 2,400 acres of land and is laying off in lots, opening streets, etc. It will build at once a 50-ton charcoal furnace, a rolling mill and car-wheel works, water works and electric works, and probably shortly follow these with two 100-ton coke iron furnaces and basic steel plant. The capital is \$1,250,000, all subscribed.

Read's Mill—Saw Mill, Chair Factory, etc.—W. T. Farrar and some English capitalists purchased the water-power at Read's Mill, mentioned in last issue. A saw mill has been purchased, a flour and grist mill is in course of erection and a chair factory will probably be started. Application will be made to change the name to Gladstone.

Sheffield—Rolling Mill.—The \$300,000 stock company lately reported as being organized to establish a 100-ton rolling mill will probably be managed by Ralph J. Wick, of Youngstown, Ohio, who is interested in it.

Sheffield—New Industries.—It is stated that New York parties contemplate erecting foundry and machine shops, saw mill, furniture and box factories. The secretary of the Commercial Club can probably give information.

Thomas—Electric-light Plant.—The Pioneer Mining & Manufacturing Co. is enlarging its electric-light plant.

Thomas—Iron Furnaces and Rolling Mill.—It is rumored that the Pioneer Mining & Manufacturing Co. will build two additional 100-ton iron furnaces on the completion of its second iron furnace.

## ARKANSAS.

Texarkana—Furniture Factory.—The organization of a stock company to establish a furniture factory is talked of.

Texarkana—Mill.—J. H. Bemis and W. L. Whitaker have purchased the mill property of J. S. Matthews, located 8 miles south of Texarkana, for \$25,000.

## FLORIDA.

Barton—Phosphate Lands.—Parties have purchased 4,000 acres of phosphate lands from J. O. Blount.

Brooksville—Cigar Factory.—The Hernando Cigar Manufacturing Co. operates the cigar factory reported in last issue.

Daytona—Bridge.—A company will construct a bridge across the Halifax river.

Gainesville—Vinegar Factory.—B. L. Baldwin will start a vinegar factory.

Green Cove Springs.—It is reported that George A. Wight, proprietor of the White Sul-

phur Springs, will organize a \$100,000 stock company to improve the property.

Island Grove—Distillery.—The Atlanta Perfumery Co., of Atlanta, Ga., reported in last issue (under Citra), is erecting a distillery.

Lake City—Publishing.—R. R. Bexley will, it is reported, publish the Florida News.

Lakeland—Sugar Mill and Evaporator.—M. Vineyard will erect a sugar mill and evaporator.\*

Ocala—Phosphate Lands.—J. F. Dunn has purchased, it is reported, 64,000 acres of land in Marion and Levy counties.

Orange City—Water Supply.—It is proposed to supply the city with water from Blue Spring.

Orange County—Land.—Louis F. Menage, of Minneapolis, Minn., has purchased 1,400 acres of land in Orange and Osceola counties.

Orange County—Land.—E. C. Pierce has purchased 5,000 acres of land from the Florida Land & Colonization Co.

St. Augustine—Artesian Well.—The St. Augustine Laundry & Dye Works is reported as sinking an artesian well.

Tallahassee—Carriage Factory.—It is reported that another carriage and wagon factory will be started.

Tampa—Cigar Factory.—Augustus Sanchez will start a cigar factory.

## GEORGIA.

Adairsville—Publishing.—Walker & Majors, of Trenton, will publish a newspaper.

Albany—Canning Factory.—A canning factory is projected.

Athens—Glass Works.—It is rumored that capitalists from another city will establish glass works.

Athens—Carriage Factory.—It is reported that Klein & Martin will enlarge their carriage factory.

Athens—Rope Factory.—The Princeton Manufacturing Co. is reported as to add a rope factory to its cotton mill.

Atlanta—Tobacco Factories.—It is stated that T. H. Blacknall is about to close negotiations for the removal to Atlanta of a tobacco factory at Baltimore, Md., and another at some point in Virginia.

Atlanta—Mattress Factory.—The Southern Spring Bed Manufacturing Co. has bought the Langston & Crane warehouse property for \$25,000, and will convert it into a large mattress factory at a cost of between \$20,000 and \$30,000.

Atlanta—Printing Office.—J. R. Wilkinson, J. E. Christian and others have organized the Mutual Printing Co. The capital stock is \$25,000.

Augusta—Hosiery Mill.—M. Hyams is organizing a \$100,000 stock company to establish a hosiery mill.

Barnesville—Electric-light Plant, &c.—The Barnesville Manufacturing Co. will put an electric-light plant and automatic fire extinguishers in its cotton mill.

Brunswick—Saw Mill.—Boyle & Co. are erecting a saw mill.

Brunswick—Electric-light Plant, &c.—The South Brunswick Telegraph, Telephone, Electric Light & Water Co. has been incorporated by J. F. Degnon, W. E. Tench and A. J. Crovatt to construct and operate telegraph and telephone lines, water works and electric-light plant. The capital stock is \$50,000.

Brunswick—Pottery.—B. H. Daniels has purchased the Brunswick Pottery, and will probably change its location.

Brunswick—New Industries.—The establishment of a candy and cracker factory, cigar factory and another paper mill is projected.

Buchanan—Oil Mill.—It is reported that a cotton-seed oil mill will be built.

Decatur—Bagging and Implement Factories, &c.—The De Kalb County Farmers' Alliance intends incorporating a stock company to establish the bagging and agricultural implement factories, oil mill, etc., lately mentioned.

McDonald's Mill.—Planing Mill.—It is stated that the planing mill of J. M. McDonald, reported in this issue as burned, will be rebuilt at once.

Macon—Canning Factory.—The Planters' Oil, Guano & Ice Co. contemplates adding machinery for a canning factory to its plant.

Macon—Canning Factory.—R. A. Nisbet, C. J. Harris, R. S. Henry and others have incorporated the Georgia Fruit & Vegetable Exchange with the privilege of operating canning and pickling factories.

Macon—Land.—The Union Real Estate & Trust Co., recently organized with H. D. Faulkner, of New York city, as president, and T. P. Stovall, vice-president and general manager, has purchased about 24,000 acres of the Hartwell Tarver land located in Twiggs county, 25 miles

south of Macon, and intends dividing up in small farms for English emigrants.

Mershon—Mill.—A mill has recently been started.

Mershon—Distilleries.—It is reported that two turpentine distilleries have been started.

Mineral Bluff—Distillery.—A. F. Johnson will erect a whiskey distillery of 120 gallons daily capacity.\*

Rome—Factory.—It is reported that a Western company will purchase the exposition grounds as a site for a large factory. A. W. Walton can give information.

Savannah—Bridge.—E. J. Thomas, county engineer, will receive proposals until January 20 for rebuilding and keeping in repair for seven years the Telfair bridge.

Savannah—Gas Works.—The Mutual Gas Light Co. is extending its gas mains.

Savannah—Water Works, Paving, &c.—The city council has, it is stated, appropriated \$20,000 for improving the water works system, \$10,000 for opening streets, and \$8,000 for asphalt paving.

Tallahassee—Cotton Mill.—The capital stock of the Enterprise Cotton Co., reported in last issue as letting contract for the erection of its cotton mill, is \$50,000.

Tallahassee—Cotton Mill.—W. P. Harvey has commenced work on his cotton mill previously reported.

Washington—Oil Mill and Fertilizer Factory.—It is reported that J. M. Green, of Atlanta, and Charleston (S. C.) parties have submitted propositions to erect a cotton-seed oil mill and fertilizer factory.

## KENTUCKY.

Addison—Flour Mill.—H. L. Morton will erect the roller flour mill lately reported as to be built by L. D. Addison and others.

Addison—Canning Factory.—L. D. Addison will start a canning factory.\*

Bowling Green—Knitting Factory and Woollen Mill.—Bemiss & Dustin, of Chicago, Ill., have submitted a proposition to establish a knitting factory and woollen mill.

Covington—Mining and Milling.—The Idaho & Pittsburgh Mining & Milling Co. has been incorporated by James McKay, H. D. Little, R. J. McKay and others for the mining and milling of gold, silver and other ores. The authorized capital stock is \$2,500,000.

Henderson—Furnace Factory.—The Henderson Patent Co. has been incorporated to manufacture the Sights & Walker patent furnace for curing tobacco.

Lawrenceburg—Distilleries.—The English syndicate lately reported (under Louisville) as securing options on Kentucky whiskey distilleries through N. Hoffheimer, has taken an option on the distilleries of T. B. Ripy, which are valued at \$500,000.

Louisville—Tobacco Factories.—It is reported that an Eastern syndicate is negotiating to purchase the Louisville tobacco factories. Pfingst, Doerhofer & Co. can give information.

Louisville—Paper Mill.—The Dupont Paper Mill Co. is the name of the stock company reported in last issue as organized by Theodore Harris and others to operate the Dupont Paper Mills. It will put in new machinery as stated, and also an incandescent electric-light plant. The capital stock authorized is \$200,000.\*

Louisville—Printing Office.—The Louisville Courier-Journal Printing Co. has recently put in a \$45,000 press.

Louisville—Chemical Works.—The Robinson-Pettet Co. has been incorporated by Charles A. Pettet, C. P. Barton, W. A. Robinson and others for the manufacture of chemicals. The capital stock is \$150,000.

Louisville.—The organization of a mutual fire insurance company is talked of. The Secretary of the Commercial Club can give information.

Maysville—Chair Factory.—Efforts are being made to secure the removal to Maysville of the Williamsburg Chair Factory.

Maysville—Woollen Mill.—R. Young & Co., of Georgetown, O., have offered to move their woollen mill to Maysville if given sufficient inducement.

Middlesborough—Water Works.—Isaac Cassin, of Philadelphia, Pa., is, it is stated, arranging for the establishment of permanent water works.

Middlesborough—Terra-cotta Works, &c.—A. M. Smith will establish fire-brick and terra-cotta works, with a capital stock of \$25,000. He will also develop sandstone quarries.

Middlesborough—Brick-yard.—The Standard Brick Co. has been organized with a capital stock of \$10,000 for the manufacture of brick.

Newport—Bridges.—The Chesapeake & Ohio Railroad Co. (office, Richmond, Va.) and the



Louisville & Nashville Railroad Co. (office, Louisville) will construct bridges.

Newport—Frame Factory.—The Lowe-McHenry Manufacturing Co. has been incorporated by E. K. Lowe, F. S. Kinney and George McHenry to manufacture picture frames and mouldings in Cincinnati, Ohio. The capital stock is \$20,000.

Newport—Heel and Sole Leather Factory.—George W. Neff, A. W. Neff and F. J. McMurrer have incorporated the Neff-McMurrer Co. for the manufacture of heel and sole leather, etc. The capital stock is \$3,000.

Newport.—The Glenn Park Land Co. has been incorporated by Samuel Steelman, Henry Abel, G. J. Fister and others to deal in real estate.

Paris—Electric light Plant.—The erection of the electric-light plant lately mentioned has been commenced by a stock company. J. M. Thomas can give particulars.

#### LOUISIANA.

Jump—Wharf, &c.—James H. Windrim, supervising architect, Treasury Department, Washington, D. C., will receive proposals until February 8 for the construction of a wharf, coal bin, revetment, &c., for the United States revenue station, according to plans, to be had on application.

L'Argent—Levee Works.—Contract for 10,000 cubic yards of levee work has been awarded to A. P. Martin.

Monroe—Cotton Factory.—A. B. Tislington is considering the manufacture of cotton goods and yarn and wants information about the business.

New Orleans—Chemical Works.—The Standard Guano Co. and others have organized a \$150,000 stock company to manufacture chemicals and bi-products. Works to cost about \$100,000 will, it is stated, be built.

New Orleans—Gas Works.—The city has granted a franchise to the company previously reported as organized to build works for the manufacture of fuel gas by L. E. Lemarie and others. The company is to begin work within one year after the signing of the contract. The estimated cost of the works is \$2,000,000.

New Orleans—Ice Factory.—The Crescent City Ice Co., operating an ice factory, has been incorporated by C. O. Gage, J. F. Krantz, A. S. Lyons and others. The capital stock is \$100,000.

New Orleans—Breweries.—It is reported that all the beer breweries will consolidate. Jacob Hassinger can give particulars.

Vidalia—Levee Work.—Contract for building about 10,000 cubic yards of levee work has been awarded to W. A. Ober.

#### MARYLAND.

Baltimore—Lime Works and Quarries.—The Texas Lime Co. has been incorporated by Benjamin Trotton, James McAllister, Charles H. Classen and others to develop quarries of limestone, marble, etc., and the manufacture of lime. The capital stock is \$5,000.

Baltimore—Packing-house and Tin Can Factory.—The Martin Wagner Co. has been incorporated by Martin Wagner, John Boyle, J. G. Schorr and others to succeed Martin Wagner & Co., fruit and oyster packers and manufacturers of tin cans. The capital stock is \$200,000.

Baltimore—Machine Works.—The Detrick & Harvey Machine Co. has been incorporated by J. S. Detrick, Alexander Harvey, Thomas K. Carey and others to succeed Detrick & Harvey, manufacturers of special machinery and machinists' tools. The capital stock is \$150,000.

Baltimore—Carriage Factory.—The Steinbach Manufacturing Co. has been incorporated by G. P. Steinbach, H. L. Harvey, H. B. Leary and others to manufacture children's carriages, chairs, etc.

Elkton—Creamery.—E. J. Collins, J. M. Thacker and John M. McIntire have been appointed as a committee by the farmers to investigate the cost, etc., of a creamery.

Finksburg—Flour Mill.—F. L. Herring is putting additional machinery in his flour mill.

Frederick—Paper Box Factory.—The Frederick City Box Factory has been organized for the manufacture of paper or pasteboard boxes.

Kennedysville—Flour Mill.—W. W. McNutt has recently put in new machinery.

Jefferson—Mill.—Steiner Bros. have let contract for the erection of a mill to Schaeffer & Carey.

Washington, D. C.—The District commissioners recommend that \$750,000 be appropriated for the grading and filling of streets, constructing culverts, &c.

Washington, D. C.—The Washington Board of Trade has been organized with A. D. Anderson as secretary.

#### MISSISSIPPI.

Biloxi—Lime Works and Barrel Factory.—The New Orleans Shell Lime Manufacturing Co., Limited, expects to build new lime works, erect a barrel factory and construct wharves.

Corinth—Foundry and Machine Shop.—The W. T. Adams Machine Co. has put a new 60 horsepower engine in its foundry and machine shop.

Jackson.—A company has been organized, with Dr. P. W. Peeples as president, for the manufacture of fertilizers. Capital stock is \$30,000.

Lorenzen—Saw Mill.—C. Lorenzen & Co. contemplate enlarging their saw mill.

Natchez—Hedge Fences.—M. C. Cary is endeavoring to organize the Mississippi Hedge Co. to build hedge fences.

Natchez—Grading.—The Arlington Land Co. has let contract for grading its property to T. W. Morris at 14 cents per cubic yard.

Sunflower County—Land.—C. H. Pond, of Winona, has purchased 1,935 acres of land from the Delta & Pine Land Co. for \$15,480, and 3,560 acres for \$15,974 from the Valley Land Co.

#### NORTH CAROLINA.

Ashboro—Wood-working Factory.—The Ashboro Lumber & Manufacturing Co. has been incorporated by J. M., T. C. and H. M. Worth, I. H. Ferree, A. W. McAllister and others with the privilege of manufacturing lumber, sash, doors, blinds, etc., cotton, wool and iron. The capital stock is \$30,000. This company will probably establish the wood-working factory previously mentioned as to be erected by the Worth Lumber Co.

Asheville—Electric-light Plant.—The city will contract for lighting the streets by electricity, beginning October 1, or purchase machinery and operate its own plant. C. D. Blanton, mayor, can give information.

Asheville—Gas Works.—The Asheville Light & Power Co. will rebuild at once the gasometer at its gas works, reported in last issue as damaged by an explosion.

Asheville—Paving.—The city has appointed a committee to examine the merits of P. M. B. Young's system of street paving with vitrified brick with a view to its adoption.

Haysville—Publishing.—It is rumored that a newspaper is to be published.

Henrietta—Cotton Mill.—It is rumored that the Henrietta Mills will enlarge its cotton mill.

Lenoir—Saw Mill.—The Wilson Lumber Co., capital stock \$100,000, will operate the saw mill reported in last issue as being erected by George E. Stone & Co. The company has purchased 11,000 acres of white pine, poplar and white oak timber land.

Monroe—Cotton Factory.—Efforts are being made to build a cotton factory on the co-operative plan. R. V. Houston can give information if anything is done.

Mt. Holly—Saw Mill and Spoke and Handle Factory.—J. F. Hockenberry has purchased the Mt. Holly Planing Mill, and will, it is stated, operate as a spoke and handle factory, and also erect a large saw mill.

Moore County—Saw Mill, etc.—Deacon, Tarbell & Co., of Jonesborough, have, it is stated, purchased 30,000 acres of land, saw mill, tram-road, etc.

Nash County—Gold Mines, etc.—An English syndicate has, it is reported, made large purchases of land in Nash and Halifax counties, including gold and timber properties, water-powers, vineyards, tobacco plantation, etc.

Nashville.—W. A. Campbell states he has made arrangements for the investment of a large amount of English capital in North Carolina.

New Berne—Planing Mill.—Preparation are being made for the rebuilding of the planing mill of Daniel Congdon & Son, reported in last issue as burned; loss \$10,000.

Randleman—Cotton Mill.—The C. C. Randleman Cotton Mill, operating a cotton mill, has been incorporated by J. H. Ferree, T. C. Worth and C. C. Randleman. The capital stock is \$50,000.

Reidsville—Water Works.—A. H. Motley, Jr., will receive proposals for constructing the system of water works lately mentioned.

Rutherford County—Land.—Ansel Davis, representing Maine parties, purchased about 9,000 acres of land from C. B. Justice, of Rutherfordton, as lately stated.

Scotland Neck—Canning Factory.—A canning factory is projected. E. E. Hilliard can give information if anything is done.

Shelby—Electric-light Plant.—Contract for lighting the town by electricity will probably be let soon. The mayor can give information.

Southern Pines—Canning Factory.—M. R. Dewstoe, S. N. Rockwell, J. W. Johnston and others have incorporated the Southern Pines Fruit Growing & Canning Co. for the growing, canning and preserving of fruits and vegetables. The capital stock is \$20,000.

Sulphur Springs—Stone Quarries.—J. R. Blair, of Troy, will probably develop brownstone quarries.

Uwharrie—Gold Mine.—J. C. Spooner and H. F. Taylor, of Wisconsin, are the purchasers of the gold lands of Tebe Saunders, lately mentioned.

Winston—Cigar Factory.—Mrs. Leopold has purchased new machinery for her cigar factory.

Winston—Tobacco Factory.—W. R. Leak, E. L. Devane and Mr. Bailey will start a plug tobacco factory.

#### SOUTH CAROLINA.

Anderson—Implement Factory, etc.—The Sullivan Manufacturing Co. has been organized for the manufacture of agricultural implements, sash, doors, blinds, etc.

Blacksburg.—The Blacksburg Land & Improvement Co. has been incorporated with capital stock of \$10,000.

Charleston—Planing Mill.—R. M. and Edward Anderson have formed a partnership to operate a planing mill.

Edgefield.—The Meeting Street Co. has been incorporated with a capital stock of \$30,000.

Florence—Grist Mill and Gin.—A. Gregg will probably rebuild his grist mill and long staple cotton gin lately reported as burned.

Fort Mills—Cotton Mill.—It is reported that the Fort Mills Manufacturing Co., operating a cotton mill, will increase its capital stock.

Graniteville—Knitting Factory.—W. A. Edwards will start a knitting factory.

Greenville—Oil Mill.—The Greenville County Farmers' Alliance has appointed a committee to investigate as to the advisability of erecting a cotton-seed oil mill and warehouse.

Hampton C. H.—Saw Mill.—A saw mill is being erected.

Hamburg—Bridge.—W. A. West, of Aiken, will receive proposals until January 21 for the rebuilding of a bridge near Hamburg.

Hickory Flat—Brick-yard and Saw Mill.—D. K. Norris will erect another saw mill in the spring, and also start a brick-yard.

Mt. Pleasant—Dry-kiln.—The Phoenix Spoke & Handle Co., reported in last issue as incorporated, will erect a dry-kiln at its spoke and handle factory now nearing completion.

Spartanburg—Oil Mill.—The Farmers' Alliance contemplates erecting a cotton-seed oil mill.

Varnville—Canning Factory.—It is reported that the canning factory will be enlarged.

#### TENNESSEE.

Chattanooga—Cotton Mill.—C. W. Smith is in correspondence with Eastern parties who contemplate establishing a cotton mill in Chattanooga.

Chattanooga—Crematory.—It is reported that a stock company is being organized to build a crematory.

Chattanooga—Engine and Nail Works.—C. W. Smith is in correspondence with a party who proposes to organize in Chattanooga a stock company to manufacture engines and wire nails.

Chattanooga.—The Union Land & Investment Co. has been incorporated.

Chattanooga—Land.—Mrs. Kirshner has purchased land in the James addition to Highland Park and is grading streets and putting in a sewerage system.

Chattanooga—Machine Shops.—The Queen & Crescent System (office, Cincinnati, Ohio), mentioned in last issue, will build a new machine shop for the Alabama Great Southern Railroad, a new car shed for the Cincinnati, New Orleans & Texas Pacific Railroad and enlarge present works.

Chattanooga—Planing Mill.—J. W. Markley, of Athens, will, it is stated, erect a planing mill at East Chattanooga.

Clarksville—Sewerage System.—R. F. Hartford, C. E., of Chattanooga, is preparing plans for the sewerage system reported in last issue.

Columbia—Corn Mill.—John Ashton will erect a corn mill to have a capacity, it is stated, of 1,000 barrels per day.

Curve—Lumber Mill.—I. M. Darnell & Co. are, it is reported, putting in new machinery.

Dunlap—Saw Mill.—L. Boynton has put a new boiler in his saw mill.

Humboldt—Foundry and Boiler Works.—Kersey & Bro., of Trenton, contemplate erecting foundry and boiler works.

Humboldt—Stave Factory.—Moseley & Overton, of Greenfield, will erect a stave factory.

Knoxville—Machine Shops.—C. H. Hudson, general manager of the East Tennessee, Virginia & Georgia Railroad Co., states that his company is not quite ready to commence the construction of its new machine shops, referred to in last issue.

Knoxville—Saw Mills, etc.—A syndicate with a capital stock of \$3,000,000 is reported as investigating through its agent, D. P. Smith, of Paw Paw, Mich., with a view to purchasing timber lands and establishing saw mills and wood-working factories.

Loudon—Flour Mill.—The Farmers' Alliance of Monroe county is organizing a stock company to erect the 200-barrel flour mill reported in last issue. The establishment of the mill is not as yet definitely decided upon. P. F. Kefauver can give information.

Memphis—Pump Works.—The Tennessee Pump Works will move its pump works from Millington to Memphis.

Memphis—Stove Factory.—W. H. Wooldridge is organizing a \$100,000 stock company to establish the stove factory lately mentioned. Nearly all the stock has been subscribed for.

Memphis—Lumber Mill.—The Wright Lumber Co. is putting in a small boiler and engine and other machinery.

Memphis—Electric-light Plant.—The East End Railway Co. will, it is reported, erect an electric-light plant for arc and incandescent lights.

Nashville—Toy Factories, &c.—It is rumored that a number of small factories for making wooden toys, etc., will be started.

Rockwood—Town.—Henry C. Young and others, of Boston, Mass., are reported as securing 6,000 acres of land in the vicinity of Rockwood and to build an industrial town. This is probably the same as the company previously reported as purchasing land and to develop.

Stateville—Flour Mill.—G. W. Belknap, of Nashville, has contract, it is stated, to build a 50-barrel flour mill.

#### TEXAS.

Austin—Water-power.—J. T. Fanning, of St. Paul, Minn., will probably prepare plans for the utilization of the water-power in the Colorado river.

Austin—Publishing.—Another newspaper will probably be published.

Claude—Publishing.—W. S. Decker will publish the Argus.

Claude—Water Works.—It is reported that a stock company has been organized to construct water works.

Cleburne—Foundry and Machine Shop.—W. C. Clarkson, Jr., and J. C. Morris have purchased the Cleburne Foundry & Machine Shop and will probably put in additional machinery.

Corpus Christi—Bridges.—The Port Aransas Co. will receive bids for constructing five short iron bridges.

Dallas—Saddlery Factory.—It is rumored that St. Louis parties contemplate moving a saddlery factory to Dallas.

Dallas—Cold-storage Plant.—A large cold-storage plant will, it is reported, be located in Dallas.

Dallas—Paper Mill.—New York parties have offered to take \$48,000 of the stock for an \$80,000 paper mill company if the remainder is subscribed in Dallas.

Dallas—Abattoir.—A site of seven acres has been selected for the abattoir previously reported as to be established at a cost of \$80,000 by a \$300,000 stock company organized by F. H. Doran, James Arbuckle, J. W. Simpson and others.

Dallas—Ice Factory.—The Queen City Electric Light Co., lately reported as to enlarge its electric-light plant, has let contract to Joseph Laing & Co. for the erection of a new building to be two stories, 100x100 feet, and to cost \$15,000, and contemplates operating an ice factory of 50 tons daily capacity in connection with its works.

Del Rio—Bridges.—The contract for building two bridges, previously reported, has been awarded to the Berlin Iron Bridge Co. at \$4,500.

Fort Worth—Paint Works.—Hiram Burnett, of Portland, Ore., and P. A. Huffman, will, it is reported, erect large paint works.

Fort Worth—Land.—J. H. Avery, of New York city; S. B. Carter, of Newburyport, Mass., and others have purchased 1,400 acres of land near Fort Worth for \$495,000. This is probably the syndicate previously reported as being organized in the North to purchase and develop land near Fort Worth.

Fort Worth—Bridge, etc.—The Chamberlain Investment Co. will construct an iron bridge 130 feet long and 34 feet wide. It has let contract for the development of its property to P. F. Ford at \$230,000, to include grading, bridging, &c., and probably street car line.

Hillsboro—Flour Mill.—The stock company previously reported as being organized to erect a flour mill has been incorporated as the Hillsboro Roller Mill Co. by C. N. Brooks, J. M. McDaniel, J. R. Thompson and others. The capital stock is \$30,000.

Houston—Implement Factory.—Charles A. Zilker, of Austin, has purchased the Old Houston elevator property and will, it is rumored, erect an agricultural implement factory.

Jacksonville—Pottery.—The establishment of a pottery is projected.

Laredo—Knitting Mill.—Gideon Furl, of Georgetown, offers to move his knitting mill to Laredo if given sufficient inducement.

New Birmingham—Ice Factory.—Edgar Taylor, of Corpus Christi, will move the ice factory previously reported to New Birmingham.

Palestine—Laundry.—Dallas parties will, it is reported, establish a steam laundry.

Palestine—Overall and Shirt Factory.—It is stated that an overall and shirt factory will be started.

Santa Anne—Flour Mill.—The flour mill lately reported as to be erected by Rogan & Lamberton will be a 75-barrel mill.

San Antonio—Land.—The sale of the Elmen-dorf addition, including about 700 acres of land, to a Boston company has been consummated. The company has a capital stock of \$250,000 and intends expending \$30,000 for improvements at once. Henry Elmen-dorf can give particulars.

San Marcos—Paper Mill.—The establishment of a paper mill is again being agitated.

Vernon—Electric-light Plant.—A stock company has been organized to erect the electric-light plant lately mentioned.

Vernon—Flour Mill and Grain Elevator.—It is reported that a stock company is being organized

to build a flour mill and grain elevator. The secretary of the Board of Trade can give information.

**Waco—Ice Factory.**—A stock company will operate the ice factory lately mentioned. The capacity will be 25 tons daily.

#### VIRGINIA.

**Alexandria—Mining, etc.**—The Mount Carmel Mining & Prospective Co. has been incorporated with Lawrence Gardner, president; J. L. Johnson, vice-president, and W. R. McLean, secretary, to mine, reduce and smelt minerals. The capital stock authorized is \$1,000,000.

**Alexandria—Aluminum Plant.**—The Columbia Aluminum Co. has been incorporated by Julius Emmer, J. T. Lippard, W. G. Le Duc, of Hastings, Minn., and others for the manufacture of aluminum from clay. The capital stock is to be not less than \$1,000,000 nor more than \$3,000,000.

**Berkeley—Fertilizer Factory.**—It is rumored that a large fertilizer factory will be erected.

**Blackstone—Flour Mill.**—It is reported that a flour mill will be started.

**Brentsville—Stone Quarries.**—H. H. Ford, of Philadelphia, Pa., has purchased stone quarries near Brentsville and will develop.

**Buena Vista—Mining.**—A strong English syndicate is reported as negotiating for mineral rights, and to develop if it secures same.

**Buena Vista—Wagon Factory.**—P. S. Wise, lately mentioned as to erect a wagon factory, has, with H. H. Myers, B. C. Moomaw, S. P. H. Miller and others, incorporated the Wise Wagon Works. Mr. Myers is president. The capital stock is to be not less than \$10,000 nor more than \$100,000.

**Danville—Publishing.**—S. H. Miller, of Rustburg, contemplates publishing a newspaper.

**Happy Creek—Lime Works.**—Parties have purchased 60 acres of land from Charles Marshall and contemplate starting lime works.

**Lexington—Brick and Tile Works, etc.**—The Lexington Investment Co. has been incorporated with W. F. Pierson, president, and J. S. Adomson, secretary and treasurer, to deal in real estate and manufacture brick and tiles, saw and finish lumber and cut stone. The capital stock is to be not less than \$10,000.

**Lynchburg—Flour Mill.**—New machinery is being put in the Hollins Flour Mill.

**Norfolk—Glass Works.**—The Boston & Sandwich Glass Co., of Sandwich, Mass., states the rumor that it would move its glass works to Norfolk is without any foundation.

**Norfolk—Steamboat Line.**—A bill has been introduced in the State Senate to incorporate the Norfolk & Washington Steamboat Co. to operate a line of steamers between Washington, D. C., and Norfolk and Portsmouth, with Calvin B. Orcutt, of New York city; V. D. Groner, of Norfolk; J. T. Odell, of Baltimore, and others as incorporators. The company intends, it is stated, constructing four first-class steamers of an average speed of 20 miles per hour.

**Norfolk—Medicine Factory.**—The Harbaugh Veterinary Remedy Co. has started a medicine factory.

**Portsmouth—Machine Shops.**—It is reported that the Atlantic & Danville Railroad Co. (office, Norfolk) has purchased 1,900 acres of land at Edgerton and intends erecting machine shops.

**Richmond—Marl Mines.**—The Hampstead Marl & Phosphate Co. is the name of the company reported in last issue as incorporated to develop marl beds.

**Richmond—Tobacco Factory.**—The S. W. Venable Tobacco Co. will be organized to succeed S. W. Venable & Co., manufacturers of tobacco. The capital stock is to be not less than \$250,000 nor more than \$1,000,000.

**Richmond—Tobacco Factory.**—P. H. Mayo & Bro., manufacturers of tobacco, have incorporated with P. H. Mayo, president; Thomas Atkinson, vice-president, and E. C. Mayo, secretary. The capital stock is to be not less than \$250,000 nor more than \$1,000,000.

**Richmond—Cigarette and Tobacco Factories.**—It is claimed that a company incorporated in New Jersey with a capital stock of \$25,000,000 has purchased the tobacco factories of W. Duke, Sons & Co., of Durham, N. C.; cigarette and tobacco factories of the Allen & Ginter Co. and the Kinney Tobacco Co., of Richmond, and the cigarette machine works of the Bonsack Machine Co., of Bonsack, Va., besides several Northern factories.

**Richmond—Crematory.**—The city is considering the construction of a garbage crematory.

**Richmond.**—A bill has been introduced in the legislature to incorporate the Southern Coal & Iron Co. with W. B. Gay, A. L. Boulware, J. H. Freeland and others as incorporators. The capital stock is to be not less than \$100,000 nor more than \$5,000,000.

**Richmond—Cornice Works.**—The Richmond Galvanized Cornice Iron Co. has been incorpo-

rated with E. Hoffman, president, and T. Heinson, secretary, to manufacture galvanized iron and copper work. The authorized capital stock is \$25,000.

**Roanoke—Bridge.**—The Melrose Land Co. will construct a bridge 45 feet long and 12 feet wide.

**Roanoke—Plaster Works.**—The Fitzgerald Patent American Compound Co., of Huntington, W. Va., is endeavoring to organize a stock company to locate branch plaster works in Roanoke.

**Roanoke—Ochre Mines.**—Mineral paint has been discovered on the land of Mrs. L. C. Crane, near Roanoke, and will, it is reported, be developed.

**Salem—Brick-yard.**—George R. Pierpont, of Berlin, Conn., has purchased the farm of A. M. Zirkle, near Salem, and will start brick-yard to have a daily capacity of 40 M bricks.

**Waynesboro—Land.**—M. E. Miller and others, reported in last issue as purchasing the Gallagher farm, have incorporated the Waynesboro Co. with Mr. Miller, president; T. H. Antrim, vice-president; R. G. Wright, secretary, and J. F. Templeton, general manager. The company will improve the property.

#### WEST VIRGINIA.

**Barnesville—Electric-light Plant and Gas Works.**—The Barnesville Gas & Electric Light Co. has been incorporated with a capital stock of \$40,000.

**Cairo—Oil Well.**—Boden & Aken have let contract for sinking the oil well on the farm of A. M. Douglass, mentioned in last issue, to A. L. Gracey.

**Lubeck—Flour Mill.**—A stock company, recently organized by T. C. Cothern, W. T. Bridges and others, is erecting a roller flour mill.

**Mannington—Oil Wells.**—George F. Nyvell, of Kune, Pa., has leased 200 acres of land and will probably sink an oil well.

**Moorefield—Timber Land.**—Callery & Co., of Pittsburgh, Pa., are the purchasers of the timber land from J. H. Broll, reported in last issue.

**Morgantown—Planing Mill, etc.**—The Tygard Manufacturing Co. is the name of the stock company previously reported as being organized to erect a planing mill, foundry and machine shop. It has purchased the old carriage works of Fairchild, Lawhead & Co. for \$11,000, and will remodel same for its business. The capital stock is \$20,000.

**Moundsville—Flour Mill.**—It is reported that D. Levi will erect a flour mill.

**Murphy's Mills—Flour Mill.**—The Murphytown Mill Co. has recently added new machinery to its flour mill.

**Parkersburg—Docks, Wharves, etc.**—The West Virginia Improvement Co. has been incorporated, with an authorized capital stock of \$100,000, for the construction of coal docks, wharves, railroads, etc.

**Point Pleasant—Saw Mill.**—Schuler & Haines are erecting a saw mill.

**Shepherdstown—Cable.**—The Maryland & Virginia Bridge Co. will erect a wire cable over the Potomac at its ferry for use during high water.

**Webster County—Land.**—Hon. J. N. Camden, of Parkersburg, and J. T. McGraw have concluded the purchase of the Hoffman lands on Sugar creek and Elk river, previously reported as being negotiated for.

**Wheeling—Electric-light Plant, &c.**—The Schmulbach Brewing Co., previously reported as enlarging its brewery, is having plans prepared by E. W. Wells for the erection of a six-story building. The company will put in an electric-light plant and build also a grain elevator.

#### BURNED.

**Bells Ferry, N. C.**—The mill of Samuel Quinler damaged by a boiler explosion.

**Bremen, Ga.**—The Bremen Hotel; loss \$10,000.

**Charleston, S. C.**—The sash, door and blind factory of the Hall Manufacturing Co.; loss about \$5,000.

**Dublin, Texas.**—The business house of Higginbotham Bros.; loss \$15,000.

**Hindsville, Ark.**—The flour mill of Whitener & Smyer, two miles west of Hindsville; loss estimated at \$5,000.

**Howard, N. C.**—The saw mill and dry-kilns of Greenleaf Johnson & Son; loss reported at \$40,000.

**Huntsville, Ala.**—The grist mill and cotton gin of Gus Martin.

**Macon, Ga.**—The Hatcher Iron Works; loss reported as \$40,000.

**McDonald's Mill, Ga.**—The planing mill of J. M. McDonald; loss reported at \$100,000. Will be rebuilt.

**Sparta, Tenn.**—The saw mill of Davidson & Pearson; loss about \$5,000.

**Upper Marlborough, Md.**—The engine-house and machinery of the Baltimore & Potomac Railroad Co. (office, Baltimore); loss estimated at \$30,000.

**The cotton gins of J. Moore, near Taylor, Texas; Nathan Weaver, Corsicana, Texas; John Petty, near Aspen Hill, Tenn.; Oslin Baker, near McDonald, Ga., and Perry Nugent, Greenville, Miss., have been burned.**

## Building Notes.

**Anniston, Ala.**—V. H. Marshall will erect a two-story building 120 feet in length to cost \$6,000.

**Anniston, Ala.—Hotel.**—It is reported that a company is being organized for the purpose of erecting a large hotel.

**Asheville, N. C.**—Hampton & Featherston will erect two stories three stories in height and 46x98 feet in dimension.

**Beaufort, N. C.**—A depot will probably be erected. George Waterhouse can give information.

**Beaumont, Texas—Hotel.**—Valery Blanchette has the contract for the erection of the hotel previously reported.

**Blacksburg, S. C.**—The Mechanics' Building & Loan Association has been organized with W. M. Jones as president.

**Brunswick, Ga.**—Anderson & Sharpe have received the contract for the erection of a market-house. Their bid was \$12,400.

**Buchanan, Ga.—Hotel.**—A new hotel is reported as to be built.

**Burlington, N. C.**—A branch of the Building & Loan Association of Charlotte has been organized.

**Carthage, N. C.**—A branch of the North Carolina Building & Loan Association of Charlotte has been organized with James D. McIver as president.

**Chattanooga, Tenn.**—The Unitarian Church congregation is contemplating the erection of an edifice. Rev. E. D. Towle can give information.

**Chattanooga, Tenn.**—The Willhoite M. E. Church congregation is erecting a church.

**Clayton, Ala.—Hotel.**—It is reported that a brick hotel will be erected.

**Cleveland, Tenn.**—It is stated that F. M. Brown, of Decatur, Ala., will erect a business block on recently purchased land.

**Chattanooga, Tenn.—Hotel.**—S. R. Read will erect an addition 50x100 feet to his hotel, to cost \$10,000.

**Corsicana, Texas.**—The Texas Building & Loan Association contemplates increasing its capital stock to \$100,000.

**Darien, Ga.**—Pierre Lorillard has purchased land at Harris' Neck, and will, it is stated, erect cottages, etc.

**Deer Creek, Md.**—A new Roman Catholic Church to cost not more than \$7,000 will be erected by the St. Mary's congregation. Rev. Mr. Nyssen can give information.

**Florence, Ala.**—Charles Schall has secured the contract for the masonry work for the Baptist University, mentioned last week.

**Florence, Ala.**—The Florence Cotton Mills Co. is reported as contemplating the erection of 150 tenement houses.

**Florence, Ala.**—W. H. & W. G. Kendrick will erect a brick building.

**Fort Worth, Texas.**—The erection of another hotel is being talked of.

**Fort Worth, Texas.**—Contractor Tomlinson is erecting a new edifice for St. Paul's M. E. Church congregation.

**Fort Worth, Texas.**—The Fort Worth Loan & Construction Co. has secured the contract for erecting a 6½-story stone and iron warehouse 50x100 feet to cost \$150,000. Martin, Brown & Co. are the owners.

**Franklin, N. C.**—Railroad.—Steps are being taken for the construction of a railroad to Tallulah Falls, Ga.

**Georgetown, D. C.**—The Transparent Ice Co. will build an ice-storage house, a new stable and make other improvements to cost about \$10,000.

**Georgetown, Texas.—Hotel.**—A hotel is to be erected. Charles T. Belford can give information.

**Halifax C. H., Va.**—Halifax county will either repair the old county jail or build a new one. E. H. Vaughan can give information.

**Hardinsburg, Ky.**—The contract for the erection of B. F. Beard & Co.'s bank building has been awarded to Clayton Beard.

**Hillsboro, Texas.—Hotel.**—J. J. Kirksey is erecting a hotel.

**Indian Springs, Ga.—Hotel.**—The Executive Department, State of Georgia, invites proposals for the lease of the Indian Springs Reserve property for a term of 25 years from the 1st of March. The successful bidder will be obliged to build a hotel to accommodate 300 guests.

**Johnson City, Tenn.**—The report last week concerning the erection of a Masonic Temple has been confirmed. I. T. Jobe can give information.

**Jonesboro, N. C.**—A branch of the North Carolina Building & Loan Association has been organized with Redin Bryan as president.

**Kernersville, N. C.**—A building and loan association has been organized with B. J. Sapp as president.

**Keyser, W. Va.**—A branch of the Southern Building & Loan Association is being organized.

**Knoxville, Tenn.**—A school building is being erected.

**Knoxville, Tenn.**—The New South National Building & Loan Association has been incorporated by A. A. Arthur, George L. Washburn and others.

**Laredo, Texas.**—The Laredo Improvement Co. is receiving bids for the erection of a Masonic Temple.

**Laredo, Texas.**—The Legg Architectural Co. desires bids for the erection of a three-story Masonic Temple.

**Little Rock, Ark.**—The Equitable Building & Loan Association has been incorporated with a capital stock of \$2,000,000. W. H. Halliburton is president and J. B. Suttler, secretary.

**Louisville, Ky.**—James H. Windrim, supervising architect, Treasury Department, Washington, D. C., invites proposals until January 22 for furnishing labor and materials for the glass ceiling and iron, wood and copper work for the U. S. courthouse and postoffice building.

**Louisville, Ky.**—John C. Lewis will, it is stated, erect a seven-story iron, marble and glass-front store building to cost \$200,000; Edward Wilder will also erect a building to cost \$20,000.

**Louisville, Ky.**—Craig & Gifford have received the contract for erecting the new Second Presbyterian Church. The estimated cost is \$20,000.

**Marble Falls, Texas.**—It is reported that a college building 45x100 feet will be erected.

**Minneapolis, Fla.**—It is reported that H. M. Johnson, of Palmyra, N. Y., is contemplating buying land on which to erect a \$50,000 sanitarium.

**Mobile, Ala.**—The Methodists will erect a new house of worship. A. C. Danner can give information.

**Montezuma, Ga.**—T. R. McKenzie will, it is stated, erect a residence.

**Montgomery, Ala.**—It is reported that Kennedy & Son will erect a large store.

**Mountain Home, Ark.**—It is stated that a Baptist college to cost over \$10,000 will be erected.

**New Decatur, Ala.**—It is reported that a Knights of Pythias hall will be erected.

**Piedmont, Ala.—Hotel.**—It is reported that the Piedmont Land & Improvement Co. will build a hotel.

**New Orleans, La.**—It is reported that the New Orleans, Fort Jackson & Grand Isle Railroad Co. will erect a depot on land recently purchased.

**Ocala, Fla.**—George Mackey has the contract for erecting the \$15,000 dwelling, including barn, &c., reported last week as to be erected by Albertus & John W. Vogt. Electric lights will be used throughout the house and grounds.

**Palestine, Texas.**—A branch of the Southern Mutual Loan & Building Association of Atlanta, Ga., has been organized with B. F. Broyles as chairman.

**Petersburg, Va.**—John F. Bell, Richmond, has the contract for erecting a church.

**Piedmont, Ala.—Hotel.**—The Piedmont Land & Improvement Co. is reported as erecting a hotel and an office building.

**Roanoke, Va.**—The Roanoke Construction Co. will erect 10 houses.

**Rome, Ga.**—John W. Maddox and R. J. Ragan contemplate, it is stated, the erection of residences.

**Salem, Va.**—N. Hockman, of Salem, and W. H. Grove, of Roanoke, Va., have secured the contract for the erection of 10 dwellings for the Salem Improvement Co.

**Savannah, Ga.**—The Hussars contemplate the erection of a new armory. James T. Shuptrine can give information.

**Spartanburg, S. C.**—The Baptists will, it is stated, build a new church.

**Staunton, Va.**—George C. Jordan has purchased \$30,000 worth of lots at Iron Gate, and will erect \$30,000 of buildings within a year. He is organizing an improvement company with a capital stock of \$60,000.

**Staunton, Va.**—The Buena Vista Improvement Co., of Staunton, has purchased 100 lots at Buena Vista, on which will be erected \$50,000 worth of buildings.

**Suffolk, Va.**—It is reported that Suffolk may erect a market-house and town-hall, for which bonds will probably be issued.

**Suffolk, Va.**—It is reported that the Suffolk Manufacturing Co. will erect new dwellings for their employees.

**Taylor, Texas.**—Satisfactory bids not having been received, plans for a cheaper schoolhouse are being made and proposals are invited. Dan'l Moody is mayor.

**Thomasville, Ga.**—George W. Stone, of Cleveland, O., is reported as to erect a residence on land lately purchased.

**Thomasville, Ga.**—A new courthouse for Thomas county will be built.

**Union, S. C.**—A schoolhouse will probably be erected.

**Washington, D. C.**—A. H. Semmes will erect 3 dwellings to cost \$10,800; James H. Merriweather, 6 dwellings to cost \$26,000; W. R. Coon, 2 dwellings to cost \$6,000.



Washington, D. C.—The Supreme Council of Chosen Friends will, it is stated, erect a hall to cost \$40,000. W. J. Newton, treasurer, can give information.

Wheeling, W. Va.—The Union Bridge & Terminal Railway Co. will erect a union depot to cost \$200,000.

## MACHINERY WANTED.

If you desire to purchase machinery of any kind consult our advertising columns, and if you cannot find just what you wish, send us particulars as to the kind of machinery needed. We will make your wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. You will thus get all information desired as to prices, etc.

Armor Plates.—Hon. B. F. Tracy, Secretary of the Navy, Washington, D. C., will receive proposals until February 10 from parties who desire to enter the competitive trial of armor plates. The plates submitted must be 6x8 feet and 10½ inches thick.

Barrel Factory.—The New Orleans Shell Lime Manufacturing Co., Limited, Biloxi, Miss., expects to purchase soon machinery for manufacturing barrels.

Boiler and Engine.—Rogan & Lambertson, Santa Anne, Texas, want a boiler and engine for a 75-barrel flour mill.

Brick Machine.—D. K. Norris, Hickory Flat, S. C., will want brick machine in the spring.

Canning Factory.—L. D. Addison, Addison, Ky., wants prices on machinery for a canning factory.

Brick.—The District Commissioners, Washington, D. C., will receive proposals until January 13 for furnishing 750 M paving brick, more or less.

Bridges.—The Port Aransas Co., Corpus Christi, Texas, wants prices on five short iron bridges for carriage road.

Cement.—Bernard R. Green, superintendent, Library of Congress Building, Washington, D. C., will receive proposals until January 21 for furnishing and delivering 12,000 barrels of natural hydraulic cement.

Conveyors and Crushers.—The New Orleans Shell Lime Manufacturing Co., Limited, Biloxi, Miss., expects to purchase conveyors for moving shells and barrels; also crushers for lime works.

Cotton Factory.—A. B. Tinsington, Monroe, La., wants prices on machinery for the manufacture of cotton goods and yarn; also information regarding the business.

Drill Press and Lathes.—The Dupont Paper Mill Co., Louisville, Ky., will purchase a drill press and lathe.

Distillery.—A. F. Johnson, Mineral Bluff, Ga., wants complete outfit for a whiskey distillery of 120 gallons daily capacity.

Electric Lighting.—Andrews & Towne, Kissimmee, Fla., want the addresses of electric arc light firms.

Electric Lighting.—The city of Asheville, N. C., will either let contract for lighting the streets or purchase machinery and operate its own plant. C. D. Blanton, mayor, can give information.

Electric-light Plant.—The Dupont Paper Mill Co., Louisville, Ky., will purchase an incandescent electric-light plant with capacity for from 60 to 100 lights.

Engine.—The Dupont Paper Mill Co., Louisville, Ky., will purchase a 500 horse-power condensing engine—probably triple expansion.

Fire Equipment.—The chief of the Fire Department, Atlanta, Ga., recommends the purchase of another chemical engine, hook and ladder truck and hose reel.

Flood Gate.—E. J. Thomas, county engineer, Savannah, Ga., will receive proposals until January 22 for building a 20-foot floodgate at the mouth of Casey canal.

Glass Ceiling.—J. H. Windrim, supervising architect, Treasury Department, Washington, D. C., will receive proposals until January 22 for all the labor and materials for glass ceiling and iron, wood and copper work for the United States postoffice and custom-house building at Louisville, Ky.

Grist Mill.—The Roanoke Navigation & Water Power Co., Weldon, N. C., want machinery for a roller corn mill of 2,000 bushels daily capacity, to be operated by turbine wheel.

Hub, Spoke, etc., Factory.—C. H. Gifford, Fort Payne, Ala., desires catalogues and prices on hub, spoke, handle and wheel machinery.

Knitting Factory.—W. A. Edwards, Graniteville, S. C., wants prices on machinery for a knitting factory.

Lathe.—J. A. Traylor, Box 274, Richmond, Va., wants a new or second-hand foot power lathe—slide rest, 6 to 12 inches swing.

Lighthouse Tenders.—Rear Admiral D. B. Harmony, United States Lighthouse Board, Washington, D. C., will receive proposals until January 26 for labor and materials necessary to construct the lighthouse tenders Marigold and Azalia.

Lime Works.—The New Orleans Shell Lime Manufacturing Co., Limited, Biloxi, Miss., expects to purchase soon complete plant for manufacturing lime for oyster shells.

Machine Shop.—W. C. Clarkson, Jr., Cleburne, Texas, wants catalogues and prices of machinery and tools for machine shop.

Machine Tools.—Hon. B. F. Tracy, Secretary of the Navy, Washington, D. C., will receive proposals until April 16 for furnishing and erecting eight 18 inch gun lathes in accordance with drawings and specifications, to be obtained on application.

Marl Mining.—L. B. Vaughan, secretary, Hampstead Marl & Phosphate Co., Richmond, Va., wants prices on machinery for hoisting and digging out marl; also bagging same.

Paper Box Factory.—The Frederick City Box Factory, Frederick, Md., wants prices on improved machinery for manufacturing pasteboard or paper boxes.

Paper Mill.—The Dupont Paper Mill Co., Louisville, Ky., will purchase 3 cone drivers for paper machines and one harper.

Patrol System.—The District Commissioners, Washington, D. C., will receive new bids for supplying Georgetown with the police patrol system.

Phosphate Machinery.—Albertus & John W. Vogt may purchase phosphate machinery in the near future.

Printing Office.—R. R. Bexley, Lake City, Fla., wants estimates, it is stated, on an outfit for a printing office.

Pump.—N. H. McCrummer, Raif Branch, Ala., wants prices on well pump.

Rails.—Brown & Allen, Citra, Fla., want T rails.

Rails.—The Paris (Ky.) Street Railway Co. desire to contract for rails to be laid on its two-mile road shortly to be constructed. Address James M. Thomas, Paris, Ky.

Saw Mill and Engine.—D. K. Norris, Hickory Flat, S. C., will want saw mill and engine in the spring.

Sluicing Apparatus.—The Etowah Gold Mining Co., Gainesville, Ga., may want improved sluicing apparatus.

Steam Pump.—Brown & Allen, Citra, Fla., want quotations on duplex pump of from 400 to 500 gallons per minute.

Steam Yacht.—E. H. Ropes, Corpus Christi, Texas, wants prices on a steam yacht about 60 feet long and 4 feet draught.

Sugar Mill and Evaporator.—M. Vineyard, Lakeland, Fla., wants sugar mill and evaporator.

Turbine Wheel.—The Roanoke Navigation & Water Power Co., Weldon, N. C., wants a turbine wheel to operate a grist mill.

Water Works.—The Bridgeport Land & Improvement Co., Bridgeport, Ala., will receive proposals for constructing water works.

Water Works.—A. H. Motley, Jr., Reidsville, N. C., will receive proposals for constructing a system of water works.

THE Special Bankers' Edition of the **MANUFACTURERS' RECORD** contains a volume of information and presents it in excellent style, both of arrangement and typography. The progress of the South is its theme, and such a work will do much to attract the attention of capital and bring it to Southern fields of investment. The **MANUFACTURERS' RECORD** has been doing for years this class of valuable work for the South, and deserves a warm place in the hearts of our Southern people.—El Paso (Texas) Times.

THE **MANUFACTURERS' RECORD** has exercised a greater influence in the recent great material revolution in the South than any other one power brought to bear upon it. Every new enterprise, great or small, throughout the section has had a notice and encouragement. The paper has sent its agents and correspondents to "spy out the land" and publish to the world its resources and advantages. Persons interested in these "booms" or desiring to keep pace with Southern progress cannot do without the **MANUFACTURERS' RECORD**.—Lexington (Va.) News.

J. T. WYATT, Box 140, Salisbury, N. C., wants address of parties who buy white oak staves.

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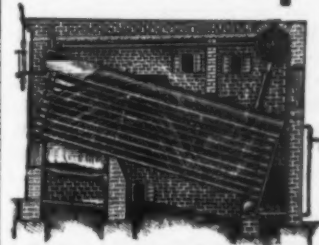
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THE Special Bankers' Edition of the **MANUFACTURERS' RECORD**, of Baltimore, Md., does great credit to the managers of that periodical, and while the **MANUFACTURERS' RECORD** has been of immense benefit to the progress of Southern enterprise, this special edition will do more good than any issue they have ever gotten out.—Troy (Ala.) Messenger.

THE **MANUFACTURERS' RECORD** is doing a great work for the South. It has perhaps done as much as all other publications of the kind combined to attract attention to the vast undeveloped resources of the South, and to encourage investors in developing them. No Southerner will begrudge the prosperity of the **MANUFACTURERS' RECORD** itself, for it deserves success.—Jackson (Tenn.) Times.

THE Bankers' Edition of the **Baltimore MANUFACTURERS' RECORD**, issued on the 21st of December, is a most valuable contribution to Southern industrial publications. It shows at length, and to a considerable extent, in detail, what the South has accomplished within a few years, the object being to present the facts and figures of the South's progress to every bank and financial institution in the country. The fact that copies of the special edition were sent to every bank in the country is of itself sufficient evidence of the enterprise of the publishers.—Lexington (N. C.) Dispatch.

AN opportunity to buy an excellent farm in the grand Piedmont region of North Carolina is offered in our advertising columns upon application to Box 530, Goldsboro, N. C. Half of the 300 acres is cleared and in a good state of cultivation, and, besides a fine house and other necessary buildings upon the place, there is a grist mill, saw mill, four tenement houses, blacksmith shop and a fine water power. It is a rare bargain.

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Steamers leave daily (except Sunday) Union Dock 6.30 P. M. Canton Wharf 7 P. M.; arrives Old Point Comfort 7 A. M., at Norfolk at 8 A. M., Portsmouth 8.15 A. M. At OLD POINT COMFORT connect with CHESAPEAKE & OHIO RAILROAD for Richmond, Charlottesville, Greenbrier, White Sulphur Springs, Louisville, Cincinnati and all points West. At NORFOLK with NORFOLK & WESTERN RAILROAD for Petersburg, Richmond, Lynchburg, Roanoke, Bristol, Knoxville, Chattanooga, Memphis and the Southwest; also with the NORFOLK SOUTHERN RAILROAD for Elizabeth City, Edenton and Eastern North Carolina. At PORTSMOUTH, VA., with SEABOARD & ROANOKE RAILROAD for Weldon, Raleigh, Southern Pines, Charlotte, Fayetteville, New Bern, Wilmington, Charleston, Columbia, Augusta, Savannah, Jacksonville and all PRINCIPAL SOUTHERN CITIES.

Palace Steamers, Unsurpassed Cuisine, Undisturbed Night's Rest. Save Connection. For Tickets and Information apply at Company's Office, 120 E. Baltimore St. or on board steamers.  
E. BROWN, G. T. A. KENNEDY, Agents.

## Better Than a Gold Mine.

### Millions Pouring Into Florida's Phosphate Lands.

#### Great Fortunes Made In a Day.

Truly there seems to be no limit to the wealth-creating resources of the South. While Alabama, Kentucky, the Virginias, North Carolina, Tennessee and other States are drawing the world's attention to their vast stores of iron and coal, and while industrial towns are everywhere in these States growing with amazing rapidity, Florida steps to the front with discoveries of phosphates so enormous as to stagger belief. For miles great beds of phosphate rock of unequalled richness have been found, and clamorous buyers are seeking to secure lands hitherto almost valueless, or, at least, supposed to be so, with prices jumping from a few dollars an acre up to a hundred or more.

A special dispatch to the MANUFACTURERS' RECORD gives the following particulars:

OCALA, FLA., Jan. 4, 1890.

About three million dollars has been paid for phosphate lands in Marion and Citrus counties in past four months. Dunnellon seems to be the center of richest and largest deposits.

The Dunnellon Phosphate Co. was incorporated with a cash capital of \$1,200,000. This was the first company to start, and they had been buying and taking options on phosphate lands for four months before other parties began investing. It is generally conceded that this company have the inside track. They bought lands from \$5 to \$30 per acre that would now command 500 per cent. advance. There is a reticence displayed by all the phosphate investors, and there have been correspondents from Boston, New York, Philadelphia, Charleston, Chicago, Atlanta and other points, who were sent here expressly to write up phosphates, but none of them have been able to acquire the desired information. That there is no delusion in the investment is a settled fact, for stock cannot be bought at 300 per cent. advance, and the purchases still continue. I learn that the Dunnellon Co. have secured about 26,000 acres in Marion and Citrus counties, with Dunnellon as a center and divided by the Withlacoochee river. Mr. Dunn, of this company, purchased last week from foreign owners 65,000 acres of land in Citrus and Levy counties, involving an outlay of about half a million dollars. These lands border the Withlacoochee, and are heavily timbered as well as containing phosphates. The other phosphate company recorded a deed to them from Hosmer & Sawyer, of Lockport, N. Y., for 7,600 acres of land; consideration about \$80,000. The entire Blue Spring district, 5½ miles, is with few exceptions sold at prices ranging from \$35 to \$150 per acre. It is claimed that the phosphates near the Withlacoochee are far richer in phosphoric acid than any others in the world. It lays in pockets either at or near the surface of the ground in a high rolling country, and is easily mined. Some deposits have been sounded at a depth of 60 feet without reaching other matter. These places are furnished with ample transportation facilities by rail and water. Fernandina will doubtless be the principal Atlantic port of shipment, the S. S. O. & G. R. R., which runs through the heart of these deposits, connecting at Ocala with the F., C. & P. It is stated that large fertilizer factories

will be established here and at Dunnellon.

The following gentlemen familiar in fertilizing circles have been here during the past two or three months, and all are, it is rumored, interested financially in the companies formed: Messrs. Baldwin, of Savannah; Chisholm, of Charleston; White, of Baltimore; Mr. Fishburn, representing Mr. Grafflin; Mr. Bradley, of Boston, and two other parties supposed to be representing Bowker. Mr. Chas. G. Shepard, of Charleston, State chemist of South Carolina, and to whose father is ascribed the credit of discovering phosphate beds in that State, has been here several months, and is interested in the Dunnellon Co. He is regarded as standard authority on phosphates. Mr. D. G. Ambler, of Jacksonville, a large banker, is investing largely. There are other representatives of fertilizing houses here, but it is difficult to find who they are, as all new comers preserve a strict incognito, but they can be found on both sides of the Withlacoochee with pick, spade and auger and the inevitable test tube and acid bottle within twenty-four hours after their arrival here. There are countless samples of rock (with which this section of Florida abounds) brought in daily for inspection by the chemists (and their name is legion), but the larger proportion is in non-paying quantities or carbonate of lime, which is in abundance here, and has a purity of 97 per cent. The advance of lands in the phosphate district may be placed as from \$10 and 15 to \$50 and \$150.

I am of the opinion that the name of the phosphate company in which Messrs. Baldwin, White, Chisholm and others are interested, and of which Mr. E. W. Agnew is treasurer, will be the "Chatham Trust Co."

J. O. CLARKE.

#### Booming Times at Piedmont.

[Special Dispatch to MANUFACTURERS' RECORD.]  
PIEDMONT, ALA., January 8, 1890.

Every train brings large crowds of bankers, brokers, merchants, mechanics and all classes of people to Piedmont. The company up to 12 o'clock yesterday, when they withdrew their property from the market, had sold over \$350,000 worth. Outside transactions are very active, and some of the best and most eligible residence and business property has changed hands three or four times. Excursion trains are being run over the different railroads daily through the mineral districts adjacent to the city. The land company will possibly not sell any more lots until a site has been selected and work commenced on the following enterprises: One 50-ton charcoal furnace, car-wheel works, rolling mill, electric-light plant and water works. Thousands of dollars have been made by outside parties dealing in real estate since last Saturday.

W. G. LEDBETTER.

THE Bell County Abstract Co. has been organized at Middlesborough, Ky. This company has possession and information of all the titles of Bell county lands since the year 1785, and is prepared to furnish abstracts and guarantee titles, with plats, maps and all other desired information. Charles Seymour is president.

## Canning Factories

ESTABLISHED AND BUILT.

ALSO  
SUPERINTENDENTS FURNISHED  
To take charge of Factories.

ADDRESS  
C. PALMER MFG. CO., Blair, Nebraska.

## Beehive Power Plant

E. A. Parsons will organize at once a joint stock company, capitalized at \$60,000, to erect at Salem a "Beehive" Power Plant. The building will have a capacity of over 50,000 square feet of space with power to rent to manufacturers of large and small capital. Parties wanting space as above can learn particulars by applying to the promoter,

E. A. PARSONS,  
SALEM, VA.

## WANTS.

**WANTED.**—Card Dyer, Carder and Spinner, and other competent mill hands. Address CALUMET COTTON FACTORY, Mammoth Spring, Ark. State references and experience.

**WANTED.**—Situation as Superintendent of Cotton Mill; best of references from present employers, with whom have been with as such for nearly 20 years, and others to whom I am well known. Address HUGH BONE, Ellicott City, Howard county, Md.

**A SUPERINTENDENT WANTED.**—We desire at once a live, active, sober man to manage our Cotton Yarn mill. Must have experience and know how to manage good white help. Mill 3,000 spindles. MILLER, BLANTON & OATES, Shelby, N. C.

**WANTED.**—A position as Bookkeeper or clerk by a young man 25 years of age, who has filled the two positions together for six years in the hay, grain and retail lumber business. Good plain writer. Best of references furnished. Address BOOKKEEPER, Box 77, Port Deposit, Md.

**WANTED.**—A Gentleman of standing and integrity for several years in active business at New York and Chicago, occupying responsible position, desires to represent South some mercantile or investment interest; Knoxville, Chattanooga or Memphis preferred. Address D, Post-office Box 715, Chicago.

## WANTED.

**A Good Business Man Would Invest**  
a few thousand dollars in some good mechanical business or would join parties about to organize or extend their business in the South. Address "F. L. T." care of Manufacturers' Record, Baltimore, Md.

## PROPOSALS.

**PROPOSALS** for the construction of a Marine Barracks at the Navy Yard, Norfolk, Va. Headquarters United States Marine Corps, Quartermaster's Office, Washington, D. C., January 2, 1890.—Sealed proposals in duplicate are hereby invited and will be received at this office until 12 o'clock noon on Monday, the 27th day of January, 1890, at which time and place they will be opened in the presence of attending bidders, for furnishing all the necessary materials and labor and constructing and erecting said barracks, in accordance with plans and drawings, which may be seen, and specifications, of which copies may be obtained, upon application to the undersigned. Blank forms of proposals, embracing a general statement of provisions to be included in the contract for the construction of said barracks and all other information essential to bidders, may be obtained upon application to this office. Proposals must be made upon said blank forms and enclosed in sealed envelopes marked "Proposals for the Construction of a Marine Barracks at the Navy Yard, Norfolk, Va.," and addressed to the undersigned, who reserves the right to reject any or all bids as in his judgment the interests of the government may require. H. B. LOWRY, Major and Quartermaster, U. S. Marine Corps.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 22nd day of January, 1890, for all the labor and materials required for the glass ceiling over postoffice working room of the United States Courthouse, Postoffice, &c., building at Louisville, Ky., including the iron, glass, wood and copper work, in strict accordance with the drawings and specification, copies of which may be had on application at this office or the office of the Superintendent. Each bid must be accompanied by a certified check for \$500. The Department will reject all bids received after the time fixed for opening the same, also bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 26th, 1889.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 8th day of February, 1890, for the erection and completion of a wharf, coal bin, revetment, &c., for the U. S. Jump Revenue Station, Plaquemine Parish, La., in accordance with drawings and specification, copies of which may be had on application at this office or the office of the Superintendent, Charles G. Johnson, U. S. Custom House, New Orleans, La. Each bid must be accompanied by a certified check for \$200. The Department will reject all bids received after the time fixed for opening same; also bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 30th, 1889.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 5th day of February, 1890, for furnishing the labor and materials and putting in place complete the steel linings, including doors for two vaults, required for the U. S. Mint building at San Francisco, Cal., in accordance with the drawing and specification, copies of which may be had on application at this office or the office of the Superintendent of the Mint. Each bid must be accompanied by a certified check for \$200. The Department will reject all bids received after the time fixed for opening same; also bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 28, 1889.

**SEALED PROPOSALS** will be received at the office of the Supervising Architect, Treasury Department, Washington, D. C., until 2 o'clock P. M., on the 28th day of January, 1890, for all the labor and material required to fix in place complete the Low-pressure, Return-circulation Steam-heating and Ventilating Apparatus, including power boiler and connections, for the United States Postoffice, &c., building at St. Joseph, Mo., in accordance with drawings and specification, copies of which may be had on application at this office and the office of the superintendent. Each bid must be accompanied by a certified check for \$200. The Department will reject all bids received after the time fixed for opening the same, also bids which do not comply strictly with all the requirements of this invitation. JAS. H. WINDRIM, Supervising Architect. December 27th, 1889.

**THE BOARD OF SUPERVISORS** of this county will either repair the present jail by putting in steel cells, or build a new jail. Correspondence from contractors solicited. E. H. VAUGHAN, Clerk of the Board, Halifax C. H., Va. January 1, 1890.

## BUTTE, MONTANA,

The railroad, mining and commercial center of the new State, offers some of the best inducements for investments in Real Estate, Mines and Mining Stocks of any locality in the Northwest.

For particulars address

The Evans, Terry, Claussen Brokerage Co.  
41 E. BROADWAY, BUTTE, MONTANA.

## FOR SALE.

One Second-Hand 18 Horse-Power Traction Steam Engine.

Used very little, and in complete order. For particulars address

FRANK TOOMEY, 131 N. 3rd St., Phila, Pa.

## Money to Invest.

A Secretary and Business Manager of more than 30 years' experience will invest a few thousand dollars in a good paying, safe and legitimate Southern enterprise, guaranteeing him a salary and fair profits. Banking or kindred interests preferred. Must be in healthful location, good schools and pleasant surroundings.

Address "BUSINESS,"  
Care Manufacturers' Record.

## FOR SALE CHEAP.

### A Farm of 300 Acres.

150 Cleared and in Good State of Cultivation.

A good Grist, Flour and Saw Mill, six-room Dwelling, Barn and all necessary Out Houses, four Tenant Houses, Wood and Blacksmith Shop, (all new.) Water Power sufficient for manufacturing. Large original hard wood forest adjacent. Good hunting and fishing; within six miles of one of the largest railroad centers and lumber markets in North Carolina. For further particulars, address

Box 530, Goldsboro, N. C.

## FOR SALE.

### The Manchester Cotton Mill,

Located at Manchester, N. C., on the Cape Fear & Yadkin Valley R. R., 11 miles from Fayetteville, N. C.

The mill is fully equipped for making Plaids, Checks and other colored goods. Is in running order, and could be started up at any time. Has both water and steam power. Building as follows: Dye House, Store, Machine Shop, with lathe and full set of tools, Gin and Gin House, 17 Tenement Houses, and 35 acres Land. Has Gas Machine and Piping for lighting every part of the mill. Capacity 1,750 Spindles and 55 Looms. For further particulars, address

THOS. P. BALDWIN, Prest.

5 & 7 German Street, Baltimore, Md.

## PUBLIC SALE

OF

## CITY LOTS,

FEBRUARY 4th, 1890.

### 500 CHOICE LOTS,

OF

## Morristown, Tenn.

WILL BE SOLD.

We will offer at public sale, on Tuesday, February 4th, and succeeding days, some of the most valuable vacant lots right in the center of the heart of Morristown.

THIS IS YOUR TIME.

J. S. FITZGERALD & CO.

Real Estate Agents,

MORRISTOWN, TENN.



## To Manufacturers. Arkansas Investments.

# SUMTER

## South Carolina,

is situated in Sumter county, midway between Florence and Columbia—40 miles from each—95 miles from Charleston, 125 from Augusta, Ga., and 136 from Wilmington, N. C., in the heart of an

### EXCELLENT AGRICULTURAL COUNTRY.

It is on the Wilmington, Columbia & Augusta Railroad, and is the terminus of the Central of South Carolina as well as present terminus of the Eutawville Railroad, which is in course of construction to connect with railroads from Norfolk, with prospects of another in the near future.

It has a rapidly-increasing population, which at present numbers about 4,000.

### ITS HEALTH IS UNSURPASSED

and it is one of the finest locations in the South for a

## Winter Resort

for those seeking refuge from the cold blasts of the North.

A \$50,000 HOTEL is now under discussion, and any reliable hotel man who would like to engage in the undertaking can learn of something to his advantage by addressing Mayor Mood.

## ICE FACTORY

is wanted; an Electric-Light Plant is now being put in, and Water Works are in progress. Those seeking locations for

## HOMES

or business will do well to correspond with the people of Sumter.

## A Rare Chance for Capitalists.

### FOR SALE.

Coal Lands on the B. & O. R. R. near Clarksburg, W. Va.; also Quarries of Beautiful Marble and other Mineral and Farming Lands in Virginia. For particulars apply to

CHAS. L. WILSON,  
Buchanan, Botetourt County, Va.

## An Experienced Manufacturer

prepared to invest \$25,000.00 in the Company is wanted to take charge of the construction and operation of the

## PORT GIBSON COTTON MILLS

### OF PORT GIBSON, MISS.

which are being reorganized, extended and improved under a new company with a capital stock of \$200,000.00.

The new Company, of which \$100,000.00 stock is subscribed in New Orleans and by the citizens of Port Gibson in cash, will have the entire plant of the old Company as a nucleus, at less than one-half its original cost. This consists of 17½ acres of land in the town, with a new and substantial brick factory building, containing ample motive power for the proposed extension and 108 looms, 3,400 spindles and all mill machinery. Liberal exemptions and privileges are granted by the State of Mississippi. The site is one of the best in the South.

Parties properly qualified as above are invited to address

V. & A. MEYER & CO.

New Orleans, - - - Louisiana.

**FREE SITES** and Coal 25 cents per ton to manufacturers desiring location in the Southwest. Cotton, Timber, Limestone, Iron, Coal Lands and Town Lots for Sale. Investments made for non-residents.

### HUNTINGTON,

Sebastian County, of two years' growth. Population over 2,000. Lies in the heart of the mineral district. Correspondence solicited.

A. L. RAYMOND, General Agent,  
Huntington Town Co., Huntington, Ark.

## To Those Looking For MANUFACTURING SITES IN THE SOUTH.

The most desirable locations in the South for manufacturing wagons, stoves, agricultural implements, furniture, or for foundries, machine shops, rolling mills, muck bar mills, nail works, glass works, cotton or woolen mills, and tanneries, are to be found in Virginia along the line of the Norfolk & Western Railroad from Norfolk to Bristol, and upon its branch lines. Hard wood of every variety; pig iron from the furnaces at Lynchburg (2), Roanoke (2 in operation and 1 now under construction), Pulaski (1), Radford (1, to be built in 1890), Salem, Graham and Max Meadows (1 at each point now under construction), Bristol (1 to be built in 1890); bar iron from the rolling mills at Roanoke and Lynchburg; coke and semi-bituminous coal from the Pocahontas Flat Top field; superior gas coals from the mines on the Clinch Valley Extension; glass sand from Tazewell county; cotton from the markets of the Southern States, and wool from all the Western and South-western States and Territories at advantageous freight rates. Favorable freight rates made upon raw materials to all factories established upon its line, as well as to points in the United States and Territories upon the manufactured articles.

Those seeking new fields for manufacturing establishments should not fail to investigate the wonderful development of iron, coal and coke industries that has been made within the past five years along the line of the Norfolk & Western Railroad, and the advantages offered by the State of Virginia in the supply of cheap raw materials; by the Norfolk & Western Railroad in the matter of freight facilities and rates upon raw materials and for reaching home, far distant and foreign markets, and by the cities and towns along its line in the way of advantageous sites at moderate cost. Many of the cities and towns exempt manufacturing establishments from taxation for a series of years.

For further information as to freight rates and sources of supply of raw materials, apply to A. Pope, General Freight Agent, Roanoke, Va., or to

CHAS. G. EDDY,

Vice-President, Roanoke, Va.

## SPECIAL INDUCEMENTS OFFERED MANUFACTURERS.

Manufacturing Sites, Mills, Farms,  
and Village Property,  
for sale by

J. L. MOON, Scottsville, Va.

# A Yankee City under Southern Sun. TALLAPOOSA, GA.

(1,200 Feet Above Sea Level.)

### READ TWO MONTHS' RECORD IN LOCATING INDUSTRIES:

October 15th, 1889.—Contract signed for completing Blast Furnace, 150 hands employed.  
October 23d, 1889.—Contract signed for Cotton Mill and Bleachery, 150 hands.  
November 1st, 1889.—Contract signed for complete Edison-Electric Plant for city.  
November 15th, 1889.—Contract signed for Jeans and Overall Factory, 50 hands.  
November 25th, 1889.—Contract signed for Foundry and Machine Works, 25 hands.  
December 9th, 1889.—Contract signed for Cotton Hosiery Mills, 150 hands.  
December 12th, 1889.—Contract signed for Pressed Brick Works, 25 hands.  
December 15th, 1889.—Contract signed for Distillery, 25 hands.

All the above are now under construction and all under contract to be running within three months from date.

Truly has it been said that TALLAPOOSA, GA., is:

*In Manufacturing the coming Pittsburgh of the South.*

*In Elevation the Pikes Peak of the Piedmont Range.*

*In Climate the Italy of America.*

*In Healthfulness the Sanitarium of the World*

**And Preeminently a Yankee City under Southern Sun.**

Correspondence with Manufacturers and investors solicited. Address

**The Tallapoosa Land, Mining & Mfg. Co.**  
TALLAPOOSA, GA.

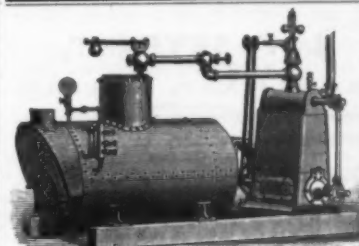
## Cotton and Woolen MACHINERY.

50 Crompton Fancy Cotton Looms, nearly new, 36 inch reed space, for 12 Harnesses, 4 boxes at one end, 1 at the other.

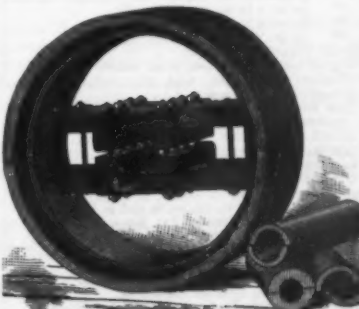
My Store Houses here have over 2 ACRES of floorage, which is covered with good machinery, including nearly full systems for Cotton and Woolen Mills.

■ JEREMIAH CLARK, ■

Lowell, Mass. Office, 63 Dutton St.



LOCOMOTIVE or BOILERS mounted as shown, with COMPACT POWERFUL ENGINES, 8 TO 40 H. P. NOT LIKE ANY.  
Castle Engine Works, Indianapolis, Ind.



PATENTED MAY 29, 1888.

DOUBLE STRENGTH

## WOOD SPLIT PULLEY,

MANUFACTURED BY

Chattanooga Wood Split Pulley Co. Chatt., Tenn.

## EDWARD ALLEN, Practical Lead Burner

BALTIMORE, MD.

Sulphuric Acid Chambers constructed on the latest improved plan. Strict attention given to the Lead Work of Concentrating Apparatus. P. O. BOX 329. ESTIMATES FOR THE ABOVE GIVEN.

## HARALSON & MURRAY,

Manufacturers' Agents and Dealers in

**Pumps, Engines & Boilers,**  
Wood and Iron Working Machinery, and General Machinists, Mill and Plumbers' Supplies.

Write for Prices. FLORENCE, ALA.



Office and Warehouses, - 9 E. Liberty Street,  
BALTIMORE, MD.



## Steam Launches STEAM YACHTS, TUG BOATS,

Marine Engines and Boilers, Propeller Wheels and Boat Machinery.

Send for free Illustrated Catalogue.

CHAS. P. WILLARD & CO.,  
236 Randolph St., Chicago, Ill.



### For Sale.

## Wood-Burning Locomotives.

Standard Gauge—15 Engines, 25 to 30 tons; one 10-ton Baldwin-Forney. 3-ft. Gauge—10 Shay patent, 8 to 18 tons; two Porter 10 and 13 ton. Other Engines, cars and rails.

A. S. MALES & CO.,  
15, 16 and 17 Aetna Building, Cincinnati, O.

## BOILERS, ENGINES, LIGHT LOCOMOTIVES, RAILS and EQUIPMENT,

Cotton Gins, Saw Mills,  
Wood-Working Machinery,  
and Heavy Hardware.

**F. A. ESTEP.**

OFFICE AND WAREHOUSE:  
Corner Market and Cowart Streets,  
CHATTANOOGA, TENN.

### A BARGAIN—FOR SALE.

## Three Horizontal Return Tubular BOILERS

16 ft.x60 inches, with flush fronts.  
A lot of Car Tanks; also Cars and Tanks,  
all in first-class condition. Address  
**LOUISIANA ELECTRIC LIGHT CO.**  
NEW ORLEANS, LA.

### FOR SALE.

12-ton ice plant (Pictet) all complete and  
and in first-class order, can be had at one-  
third cost, and been in use only one year.  
For particulars inquire of

**SO. FLORIDA FOUNDRY & MACHINE CO.,**  
ORLANDO, FLA.

### DESIRABLE INVESTMENTS IN SOUTH LYNCHBURG, VA.

We have for sale, on easy terms, Lots in South  
Lynchburg, immediately adjoining Lynchburg,  
the railroad center of the State, and a growing  
city of 25,000 inhabitants. Our property has recently  
been platted and is eligibly located on the  
Richmond & Danville R. R. within a stone's  
throw of the Lynchburg & Durham R. R.; the  
Belt Line of the Norfolk & Western R. R., now  
under construction; the new Cotton Mill with a  
capacity of 2,000 spindles; the Machine Shops  
of the Lynchburg & Durham R. R., just com-  
pleted; large Planing and Grist Mills, and Dur-  
ham Depot, the junction of the Virginia Midland  
and the Lynchburg & Durham Railroads. For  
particulars and prices, apply to PETER J. OTEY,  
Pres't L. & D. R. R. C. DeWITT, V-Pres. Lynch-  
burg Nat. Bank, J. E. EDMUNDS, Director in and  
Att'y for Lynchburg Com. Bank, Lynchburg, Va.

### NOTICE

To Contractors or Manufacturers of  
Heating and Plumbing Appliances,  
Elevators, &c.

I require in hotel of about 120 rooms, six stories,  
length 111 ft.x100, to be heated with steam, and  
thoroughly fitted with wash-basins, bath-tubs,  
urinals, etc. and gas fittings; also passenger eleva-  
tor and appliances for working same by air  
and water from an accumulator. An iron tank of  
not less than three thousand gallons on roof of  
building, etc., etc.

I am prepared to enter into contracts with a  
responsible party, with cash payment on satisfac-  
tory completion of this work.  
The plans and premises can be viewed in  
Roanoke until December 15th, 1899.  
Satisfactory references can be given.

**C. G. SMITH,**  
Commercial Hotel, ROANOKE, VA.

## Attention Manufacturers.

We are builders of High-Grade Auto-  
matic and Throttling Engines, Boilers,  
Vertical, Horizontal and Portable. We  
also manufacture the highest grade  
of Wood-working Machinery, and at  
prices to meet the times. Do not  
buy until you get our figures. We  
can save you 25 per cent. in your plant.  
All the latest and best improvements in  
our machinery. Prices on complete Plants.  
Special prices for cash. Over 1,000 bar-  
gains in second-hand Engines, Boilers,  
Wood-working and Saw Mill Machinery.

**Dirigo Engine & Machine Co.**

171-175-77 Kennebec St.,  
PORTLAND, ME.

### For Sale.

## BOILERS. 41 Second-Hand and 23 New Boilers, 13 Second-Hand and 19 New ENGINES.

At buyers' prices. Address  
**CASEY BOILER MFG CO. Chattanooga, Tenn**

### FOR SALE.

## A NEW 100 HORSE-POWER AUTOMATIC CUT-OFF ENGINE, at a Low Price.

Also a 100 horse power SLIDE VALVE ENGINE  
that has been in use 18 months, but is in most ex-  
cellent running order. Can be seen running for a  
month. Will be sold at one-half its cost. Apply to

**RICHMOND MACHINE WORKS,  
RICHMOND, IND.**

### FOR SALE.

Five Single Surfacers. Three Double Surfacers.  
Three eight-inch Matchers (four-sided).  
Two fourteen-inch Matchers (four-sided).  
Two twenty-four-inch Matchers (three-sided).  
ALL SECOND-HAND. Send for full list to

**THE PREBLE MACHINE WORKS CO.**  
38 & 40 W. MONROE ST. CHICAGO, ILL.

### SECOND-HAND MACHINERY.

1 Iron Planer, planes 20 feet, 48x48, double heads.  
1 " " " 13 feet long, 30x6 in.  
1 " " " 8 " " 31x31 in.  
1 " " " 7 " " 30x36 in.  
1 " " " 4 " " 30x16 in.  
and other sizes also.  
1 Engine Lathe, 16 feet bed, 23 inch swing.  
1 " " " 8 " " 15 " "  
1 " " " 10 " " 15 " "  
and various other sizes.  
1 30 inch Plain Drilling Machine.  
1 25 " " " "  
1 9 in. Hewes & Phillips Shaping Machine.  
1 No. 3 Brown & Sharp Screw Machine.  
1 6 1/2 in. Slitter, automatic feed.  
1 No. 3 1/2 Stiles & Parker Press.  
1 No. 5 " " " "  
1 No. 2 P. & W. press. 1 Arch Press for forming.  
Send for list Second-hand tools.  
**NEW YORK MACHINERY DEPOT,**  
Brooklyn Bridge Store, 16, New York.

**SPECIAL NOTICE.—Bargains in  
High-Speed Automatic  
Cut-Off Engines.**  
These high-speed automatic cut-off engines  
were built by the Southwark Foundry and Ma-  
chine Company, of Philadelphia, and are com-  
monly known as the "Southwark Engine." They  
are specially adapted for electric-light installa-  
tions and all high-class work requiring uniformity  
of speed, economy, durability, etc.

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**Plane (D) Slide Valve Engines.**  
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6 and 8 ft.; 1 each 24 in. x 30 in. and 24 ft.; 24 in. x 20  
ft.; 24 in. x 15 and 16 ft.; 18 in. x 10 ft.; 30 in. x 10  
ft.; 30 in. x 12 ft.; 1 each 16 in. x 6, 8 and 10 ft.;  
6 each 14 in. x 6 ft.; 1 each 12 in. x 5 ft.; 1 each 12 in. x 4  
ft. and 5 ft.; 1-10 in. x 3 1/2 ft., foot power.  
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1 " " 42 in. x 42 in. x 10 and 12 ft.  
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We have entirely closed out our purchase of the Narrow Gauge (3 ft.) Equipment of the Cleveland  
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50 Second-Hand Narrow Gauge Locomotives. Dif-  
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These Locomotives have been overhauled. All are  
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Also some second-hand steel rails.

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25 38-in. Gauge Dump Cars.  
For particulars apply to

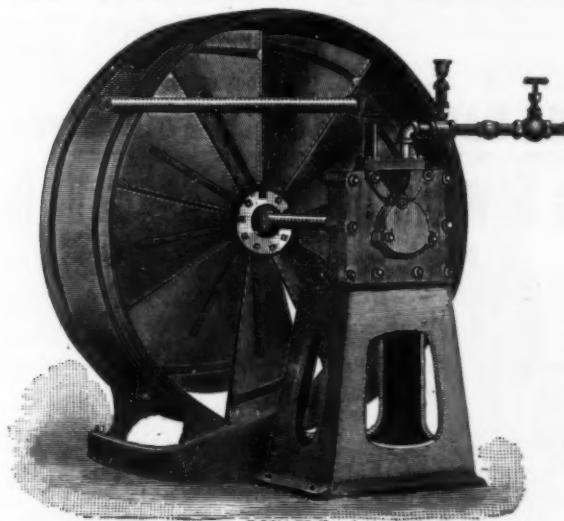
**J. C. SAXTON,**  
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## TRADE NOTES.

THE 1890 price-list and catalogue of the Phosphor-Bronze Smelting Co., 512 Arch street, Philadelphia, is just out. It is a neat, handy volume, and contains all the information purchasers of this valuable metal would care to know. The various lines of goods, whether sheet metal, wire chains, castings or other form, are described in detail and prices annexed. A copy of the list, with any special information, can be had by applying direct to the company.

A MOST remarkable test of anti-friction metal has recently been made at Chicago. A machine which made 23,400 revolutions



CLARK'S EXHAUST FAN, WITH HIGH-SPEED ENGINE ATTACHED.

a minute was fitted with Magnolia anti-friction metal. The metal did not heat or show any evil effects of this remarkable speed, which in occasional spurts has been carried as high as 28,000 revolutions a minute. This is no special test, but is the every-day speed at which this machine is run. This is said to be the severest test ever made of any anti-friction metal.

A VERY business-like and well-arranged catalogue descriptive of brick and tile machines is issued by Nolan, Madden & Co., of Rushville, Ind. The various styles of machines are well illustrated and described. These machines are very simple, compact and solid, and they vary in capacity from 25,000 to 50,000 bricks a day. In connection with brick machines this firm builds pug mills, disintegrators, elevators, etc., and they also sell engines, boilers, etc., so that they can fill an order for a complete outfit to a first-class brick-yard at short notice. Copies of the catalogue and any information regarding the machines can be had upon application to the firm.

In announcing the change of title from Building to Architecture and Building, this publication says: "We are influenced by a desire to indicate more fully the character of the paper. Building has devoted itself to the interest of architecture as a profession. The name has led many to suppose that it was being published rather as a representative of the builders than of the architects, and to overcome every possible misapprehension of this character in the future, we have adopted the present title as better representing the character of our journal."

THE MANUFACTURERS' RECORD is doing a commendable work for the South, and the South shows its appreciation of the MANUFACTURERS' RECORD's efforts by encouraging it with the "bread of life" to the newspaper—remunerative advertisements—and making it one of the most prosperous journals of the age.—Greensborough (Md.) Press.

## The Ventilation of Warerooms.

Nothing is more conducive to a sound body, a clear brain and intelligent and productive labor than a plentiful supply of fresh pure air at a proper temperature, and in very many instances thorough ventilation can only be obtained through the use of properly placed ventilating appliances. We here illustrate the improved exhaust fan made by Geo. P. Clark, Windsor Locks, Conn.

The following points of excellence are claimed for this fan: Economical adjustment of capacity and power; self oiling and adjustable bearings; great capacity to handle air; least amount of power required for work accomplished; noiselessness and

convenient form and lightness. These fans are not only adapted for ventilating, but are also admirably suited for drying wool, cotton and other material.

In connection with his exhaust fan, Mr. Clark now manufactures a combination of fan with steam engine attached, as illustrated herewith.

The shaft of engine being the shaft of fan, all expensive and annoying belt connections are avoided.

This combination is particularly adapted for night drying, when wheel or large engine is shut down; also in places where it is necessary to set fan at a distance from any line of shafting. These engines are capable of high speed, are light-running, durable, noiseless, and economical of steam. Mr. Clark will be pleased to correspond with parties interested, and to furnish catalogue or other information.

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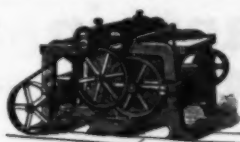
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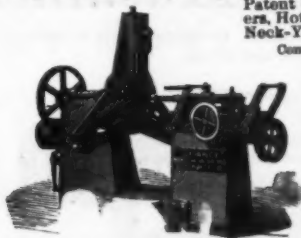
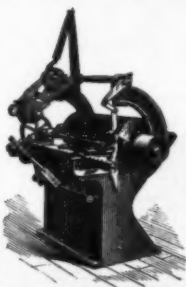
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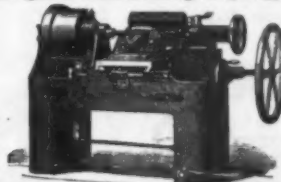
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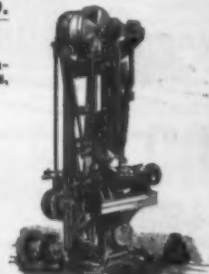
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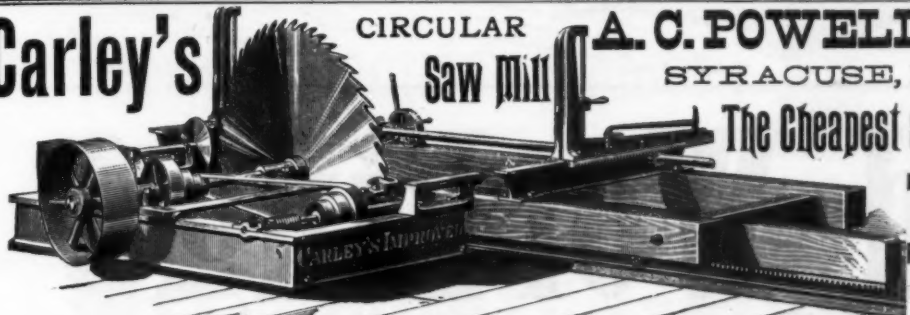
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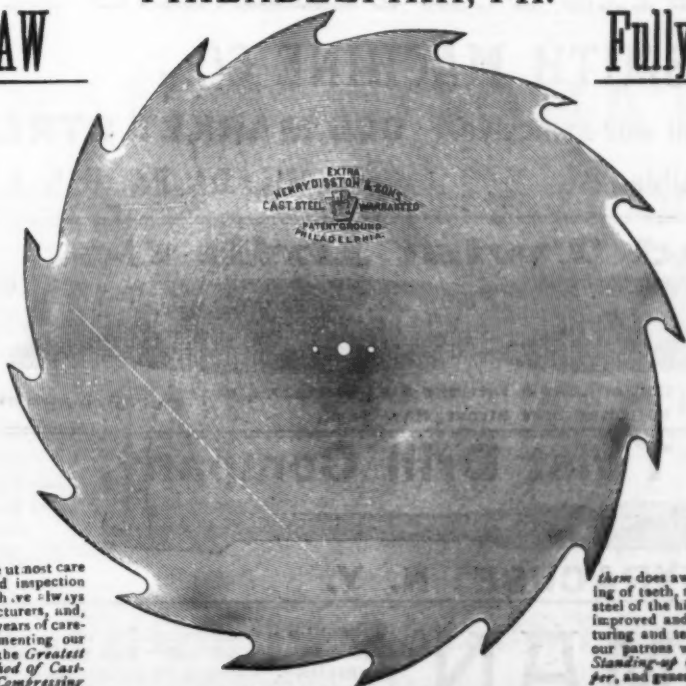
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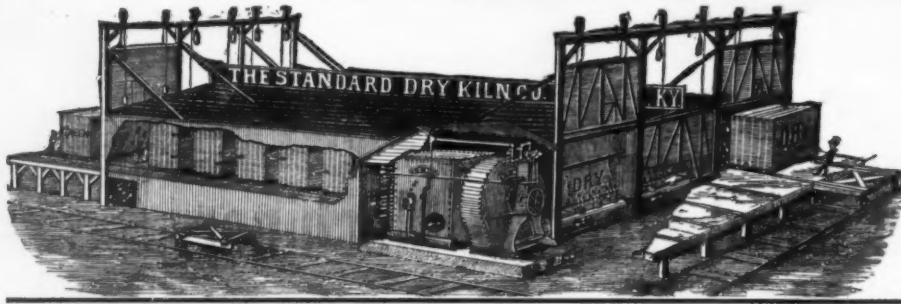
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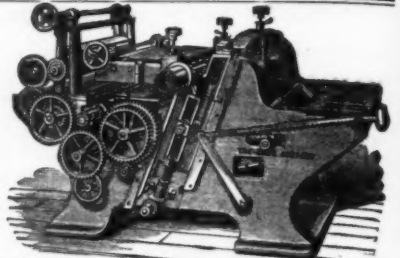
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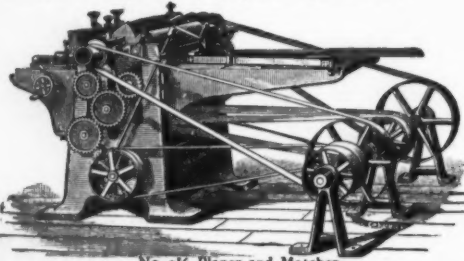
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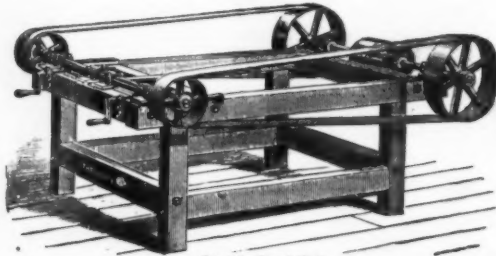
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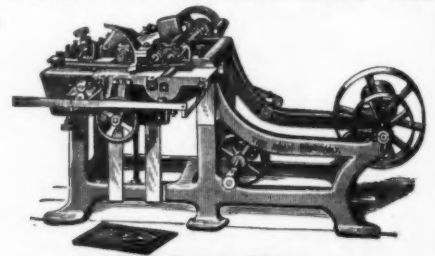


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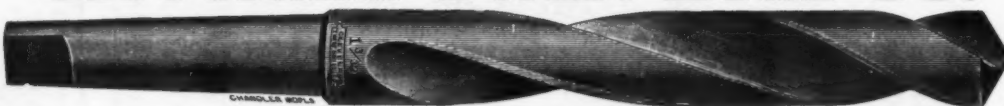
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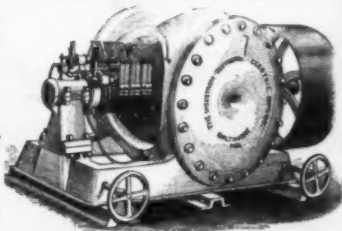
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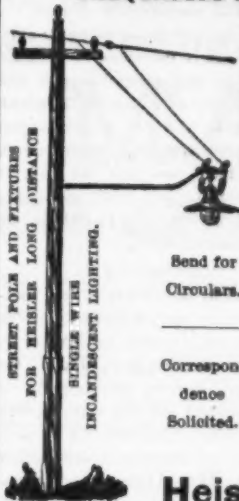
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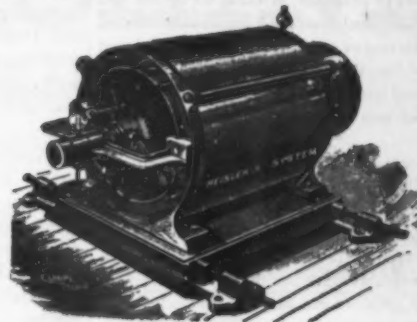
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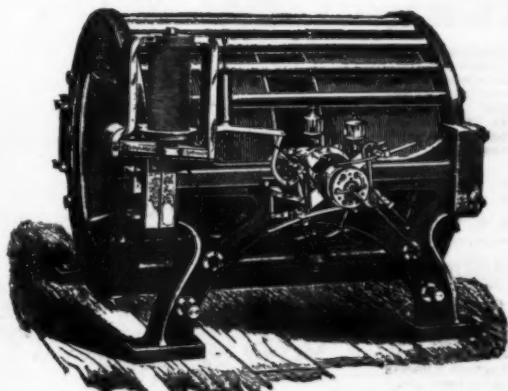
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## TRADE NOTES.

A NEAT calendar is issued by the Marion Steam Shovel Co., of Marion, Ohio. The calendar part is marked in plain figures that can be read easily at a distance, while above is a colored illustration of a steam shovel at work.

A NEAT calendar, suitable for offices and shops, is sent out by J. E. Randle & Co., proprietors of the Chicasaw Iron Works, at Memphis, Tenn., to advertise their architectural iron work, cotton compresses, castings of iron and brass, engines, boilers, &c.

A NEAT New Year's greeting is sent out by Glover & Durrett, tobacco dealers, of Louisville, Ky., to their "friends and patrons, associates and competitors." It is a most creditable sample of the printer's art, and contains statistics that will interest tobacco growers and shippers and others interested in the tobacco business.

A DAINTY calendar is sent to the patrons and friends of Talbot & Sons, of Richmond, Va., manufacturers of engines, boilers, saw mill machinery and like work. The success which the goods of this firm have met with is well illustrated by the fact that they have found it necessary to maintain branch offices at Charlotte, N. C., Columbia, S. C., and Macon, Ga.

THE St. Louis Iron & Machine Works are meeting with great success with their brick machine. One of the latest orders is for two machines of 30,000 capacity each per day for the Texas Pressed Brick Co., of Dallas, Texas. There is great development taking place in brick making in the South, and this machine is doing a very considerable part in this development.

We are informed that the Maslin Machine Works, of Jersey City, N. J., are shipping some of their patent pulsator pumps, with complete prospecting outfits, to Florida, to be used on the Peace river in pumping deposits and minerals at the mines of the De Sota Phosphate Co. These pumps are most admirably adapted to such work, and will be much used in the development of Florida phosphate interests.

REMOVAL.—Thorn Shingle & Ornament Co., manufacturers of Thorn's patent metallic roofing tiles and shingles, patent hip rolls, ridging, eave troughs, conductor pipes, stamped sheet metal work, etc., announce their removal to their new factory buildings, Nos. 1225, 1227, 1229 Callowhill street, Philadelphia, where they have increased facilities for handling their growing business. They are prepared to fill all orders with promptness.

BEGINNING January 1st, Mr. W. B. Pearson will represent the Ball Engine Co., of Erie, Pa., in Chicago, his office being 403 Home Insurance Building. His territory will be Illinois, Iowa, Northern Indiana, Wisconsin and Michigan, east shore. Mr. Pearson is favorably known to engine buyers in Chicago and surrounding territory, and the large and growing business of the Ball Engine Co. will no doubt be still further extended under his management.

THE MANUFACTURERS' RECORD learns that F. M. Arthur & Co., of Knoxville, Tenn., begin on the 10th inst. to manufacture wrought iron fencing, iron stairways, balconies, vault doors and shutters, fire escapes, tree guards, and innumerable other such kinds of ornamental and architectural iron work. The intention of this firm is to be sure of the quality of their work, and only the best material will be used and the best work done. There should be a great demand for such work in the South.

ON January 1st the name of the Bucyrus Foundry & Manufacturing Co. was changed to the Bucyrus Steam Shovel & Dredge Co., which better describes the business. The organization and management remain the same, the change being one of name only. The capital stock is increased to \$150,000 to accommodate increasing business and allow the necessary extension of the plant. This company is said to be the largest manufacturer of excavating machinery in the United States, and has the best of facilities for turning out good and heavy work. It makes a specialty to estimate on machines for difficult work.

WOOD-WORKING machinery is very thoroughly illustrated and described in the catalogue for 1890 issued by Rowley & Hermance, of Williamsport, Pa. This firm makes wood-working machinery in all forms and sizes, and the illustrations very accurately give the characteristics of each machine. For convenience of description the catalogue is divided into saw and planing mill, moulding, door, sash and blind, and miscellaneous machinery and supply departments. The catalogue contains notice of some new machines and improved mechanisms not mentioned in previous catalogues. The purpose of the firm is to increase the labor-saving utility of each of its machines to the highest possible point. With the largest workshops of the kind in Pennsylvania, and thoroughly skilled workmen, this firm is able to fill all orders promptly with machines of the best workmanship.

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**HOT BLAST CUPOLA,**  
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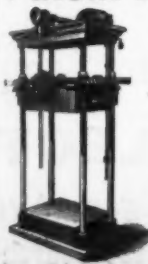
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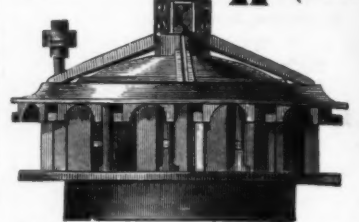
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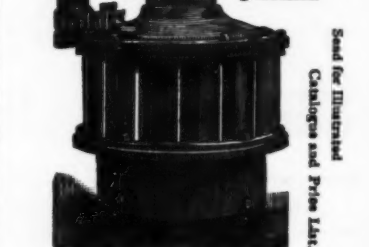
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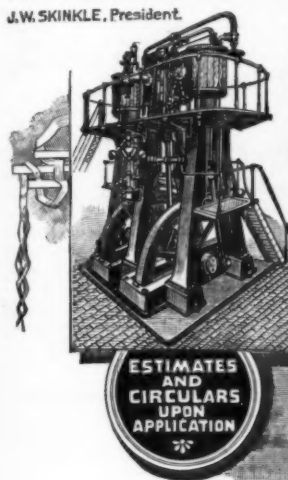
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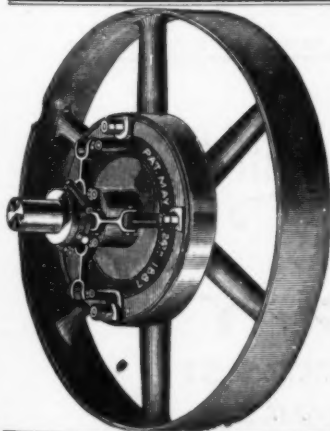
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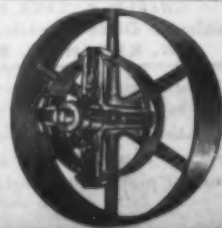
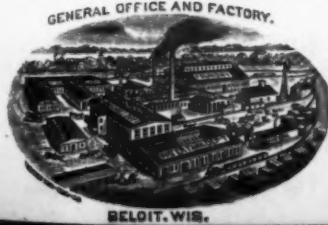
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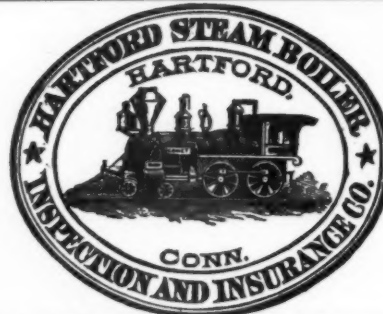
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With the superior quality of Iron Ore and Coking Coal, Marion, N. C., has in its neighborhood, it will be able, when its minerals are developed by railroads now building, to make steel at almost as low a figure as Pennsylvania now makes iron.

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After February 15th, 1890, we will put on the market more than 500,000 acres of Western North Carolina FARMING, TIMBER AND MINERAL LANDS for sale at remarkably low prices. We are now selling MARION BUSINESS AND RESIDENCE LOTS, improved or unimproved, at ten times less than they can be purchased for in twelve months. Send for prices.

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Twenty-three miles north of Marion, N. C., is the Cranberry Iron Mine. The ores of this mine, according to the report of six different assays by the State Geologists of North Carolina in "Geology and Ores of North Carolina," Vol. 2, Chapter 2, vary from sixty to sixty-eight per cent. magnetic metallic iron entirely free from phosphorus, sulphur and titanic acid.

This is one solid mass of ore 400 feet wide, 300 feet high and 1,700 feet long.

Between the Cranberry mine and Marion, and within 8 or 10 miles of Marion is the Linville Mountain, the largest mountain of iron in the known world.

A direct line of railroad is now being built from Marion to the Linville Mine, which also puts Marion in direct communication, and within three hours' haul by freight, of the Virginia coking, cannel and splint coal fields, the finest quality and easiest mined of any coal in the known world.

### Our Railroads.

The Charleston, Cincinnati & Chicago Railroad is now completed from Charleston, S. C., to Rutherfordton, N. C., a point twenty miles south of Marion. The contract for completing this road to Cincinnati, O., has been let and the grading is now being done. When built this road will cross the Western North Carolina, a division of the Richmond & Danville Railroad, at Marion, N. C., thereby making Marion, N. C., the only city in Western North Carolina that will have competitive railroads.

### Woods and Timbers.

Among the various kinds of timber in this section are wild cherry and walnut, which according to the report of the State Board of Agriculture, attains the enormous height of from sixty to eighty feet, and a diameter of three feet or more. Among the vast forests of giant trees the other timbers are chestnut, white pine, hemlock, black birch, locust, lime and various kinds of oaks. In comparison with the extent of forest lands around Marion, the clearings are mere patches, there being in McDowell County, ac-

cording to the report of the Board of Agriculture of North Carolina, 122,129 acres of wood land, and 34,778 acres of land cleared for farms.

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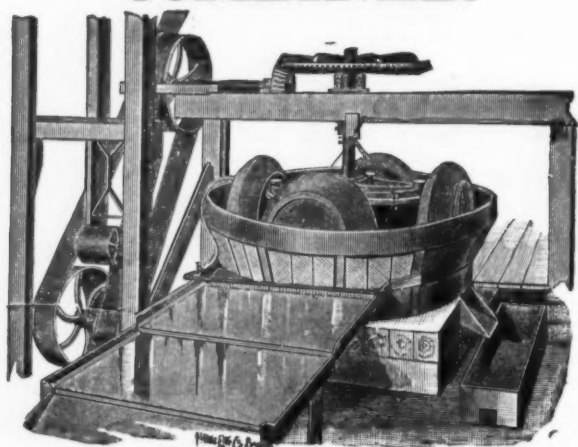
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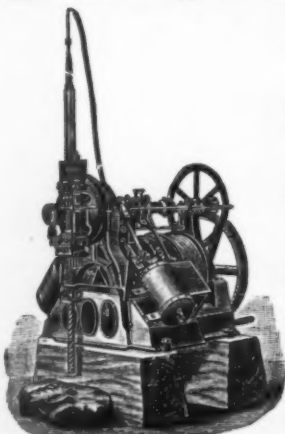
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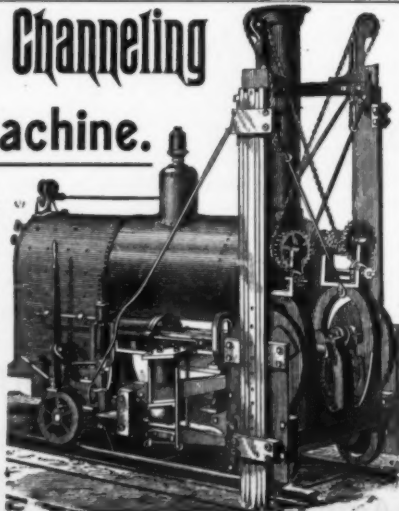
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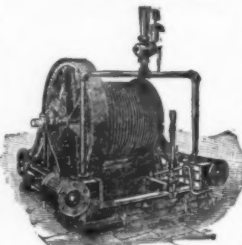


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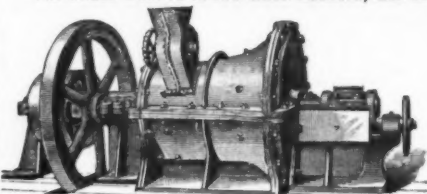
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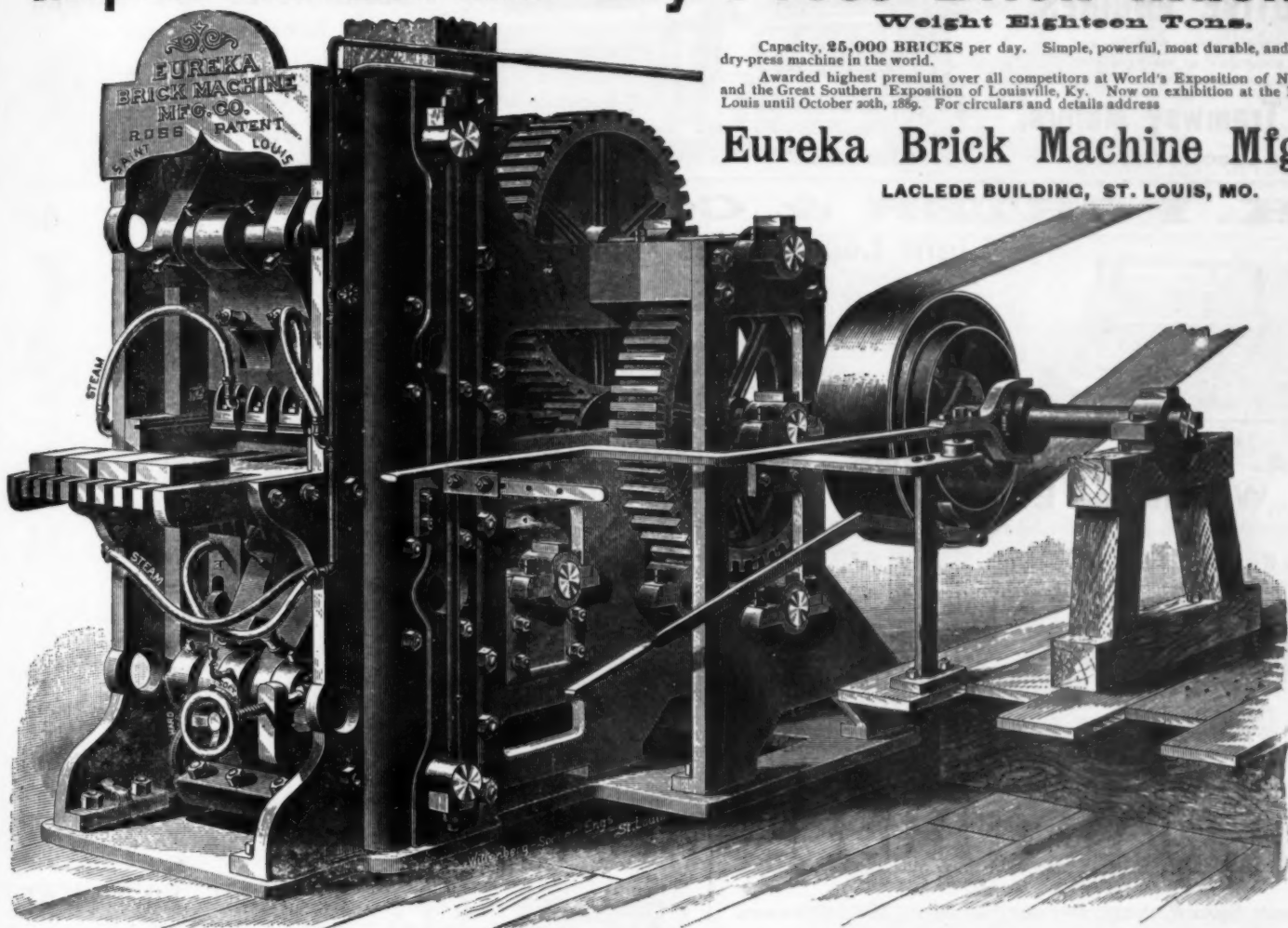
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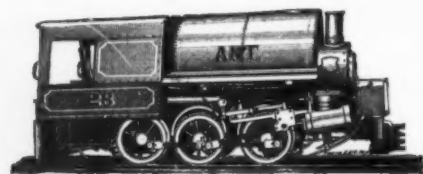
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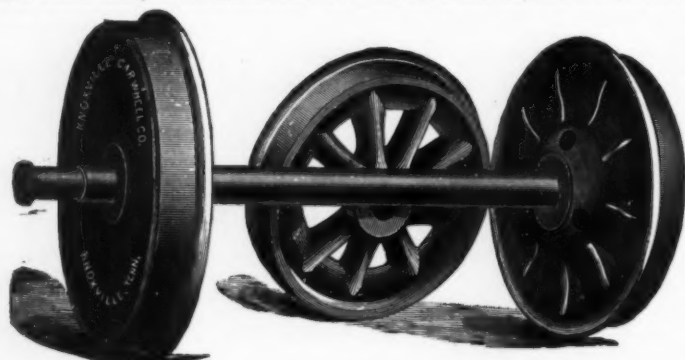
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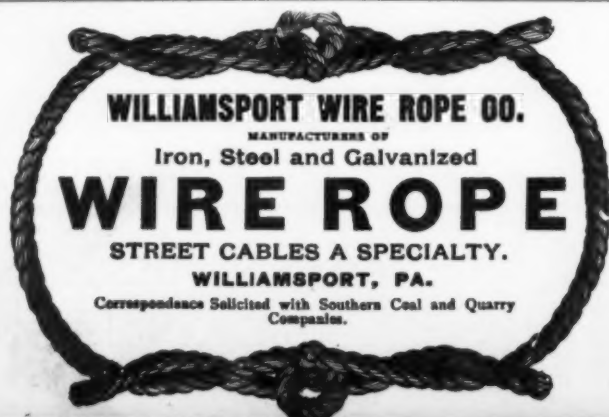


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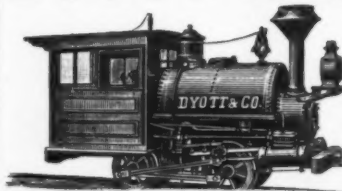
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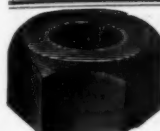
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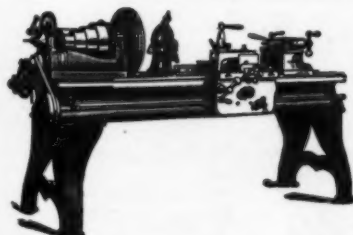
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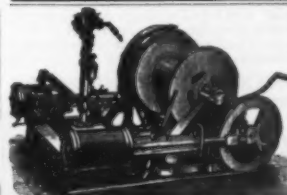
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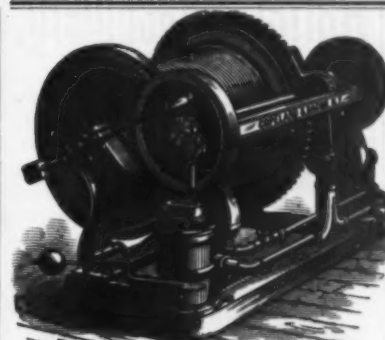


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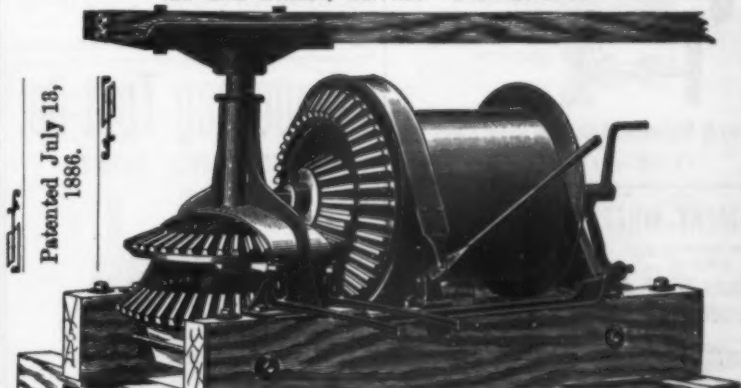
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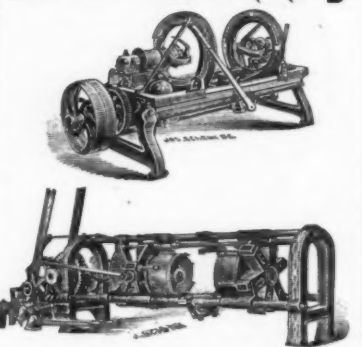
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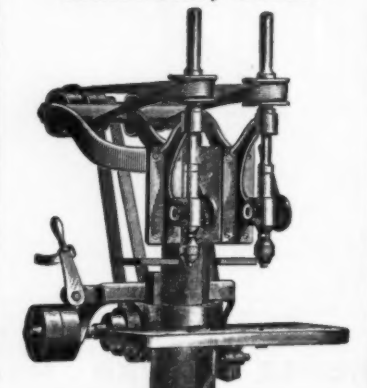
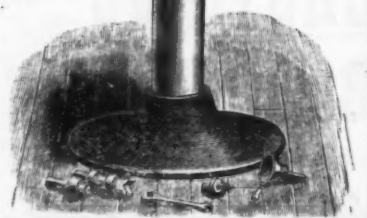
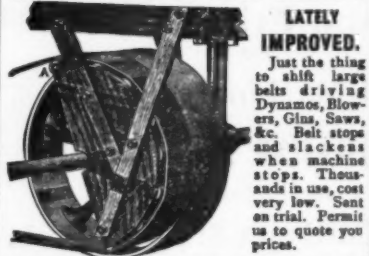
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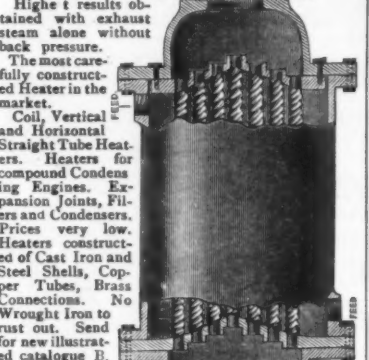
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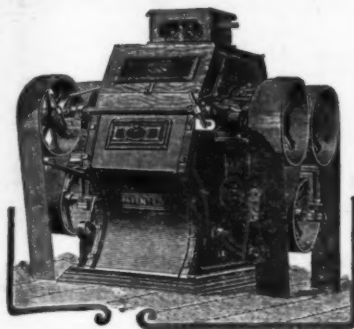
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Plain Fencing Wire. Bank  
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### Patent Automatic Double-Chisel Hub Mortising Machine.

The No. 2 automatic double chisel hub mortising machine, with boring attachment, as represented by the accompanying engraving, is said to be the largest sized machine of

from the smallest sizes to 2¼ inches wide, 5½ inches long, either straight or stagger, covering all the requirements of wagon, heavy truck and artillery wheel builders.

These machines have, since first introduced, passed through many stages of patented improvements, reaching the highest stand-

work more accurately than by any other method. They are now in general use throughout the world.

The column is cast in one piece, properly braced and provided with a broad base to stand firm, with the driving power at the top, consisting of a double-faced friction driver, running loose upon the shaft, between a disc made stationary to the shaft for driving the chisel bars, and a loose pulley on the opposite side for driving the auger spindle. Each is provided with taper friction faces which correspond with the faces of the driver. The driver is fitted free between the frictions, and its position is controlled by a combined hand and foot lever. The operator, in placing his foot upon the pedal, immediately moves the driver to engage with either friction, instantly starting the boring or mortising departments, as desired, each acting independently, entirely avoiding the constant running of such parts of the machine as are not engaged in service. In relieving the frictions an automatic brake is applied to the disc, stopping the machine instantly, the driver running as a loose pulley when disengaged; thus the operator has complete control over the machine, starting or stopping either department promptly, without changing his position or shifting the belt.

boxes, their axis being on a vertical plane at right angles to the crank shaft, each adjustable for giving the mortise desired dish and taper.

The outside bearing to the double crank insures a steady and uniform stroke. The crank and connecting rods of steel are supplied with adjustable brass bearings.

The knee supporting the table is fitted to the frame in planed and scraped angle ways, provided with adjustable gibbs to take up for wear, and is elevated to the chisels by a lifting cam operating on a friction roller driven by a positive motion from the crank shaft, thus the upper and lower movements of the machine work in exact time with each other.

The table holding the hub has a longitudinal and transverse (right angular) adjustment with the chisel bars for regulating the position of the mortise with the chisels.

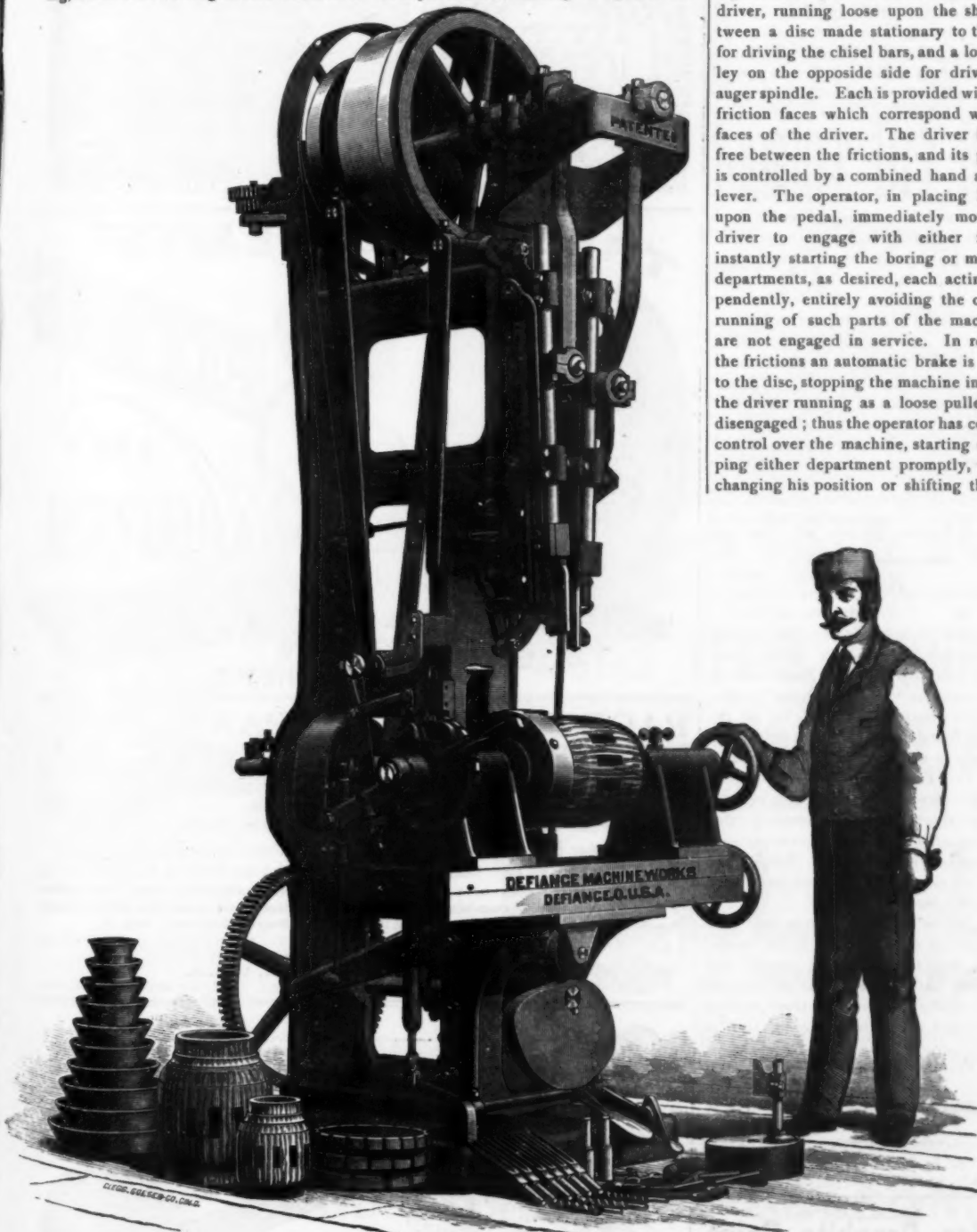
The horizontal boring spindle is conveniently fitted through the main frame with a universal chuck for securing the bit, having adjustments to bore holes for straight or stagger mortises. The center of the auger and hub agree when the bed is at its lowest position.

The hub to be mortised is held at one end in a three-jawed universal chuck, the jaws acting simultaneously by turning with a key any one of the screw heads; the other end turning in a taper cup and is automatically presented to the action of the chisels by a vertical movement of the bed. When the mortise is cut it descends by its own gravity. A dial is attached to the head spindle having as many notches in its circumferential edge as there are mortises to be cut in hub, the dial moving the distance of one notch to turn the hub every time a mortise has been cut.

In operation, the table carrying the hub is gradually lifted to the chisels until the full depth of cut is reached, when it remains stationary until the mortise is complete, when it descends, the hub turning one notch of the index plate ready for the next mortise, and it is again presented for the action of the chisels, and so continuing until the mortises are finished. The gidding, spacing, feeding, etc., are entirely automatic in their movements, thus rendering it easy for one operator to run two machines, besides affording him ample time to arrange his hubs for prompt insertion into the machine, and produce the mortising of 750 to 800 hubs per ten hours.

The weight of machine is 5,000 pounds; speed of friction driver 250 to 300 rotations per minute, driven by a 6-inch belt direct from the main line, requiring no counter except for convenience. For further particulars address the manufacturers, the Defiance Machine Works, Defiance, Ohio.

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PATENT AUTOMATIC DOUBLE-CHISEL HUB MORTISING MACHINE.

its class built, and is used for mortising or re-mortising hubs from 6 to 16½ inches diameter, cutting mortises in hard wood,

and as a labor-saving machine for hub and wheel making, reducing the cost, it is claimed, fully one-half, and performing the

The chisel bars, of steel, large diameter, are arranged side by side upon the front of the frame, sliding in genuine babbitt metal

## The Markets.

OFFICE MANUFACTURERS' RECORD,  
BALTIMORE, January 8, 1890.

Pig iron makers, excepting the makers of Bessemer, are not realizing as much out of the three or four dollars advance in prices which has been established during the past twelve months as they think they are entitled to. The bulk of the business transacted since September 1st in foundry and force irons has been at prices which allowed only a fair, and in many cases a bare, margin. Comparing quotations to-day with those of a year ago, we find the difference \$3 as a minimum, and \$4 as a maximum. The greater portion of the furnace product, however, has kept within \$2 of the lowest figure reached last year. One advantage gained within the past few months has been that iron makers have been working to full capacity. During the first six or eight months of last year there was more or less irregularity, shutting down and starting up, besides interruptions in market demand. For the greater part of the year buyers had the advantage. Sellers in many cases entered into contracts for deliveries of iron at remote dates, and before the deliveries were made prices and cost of production had advanced.

These facts should be kept in mind when it is said that the iron makers are having a booming demand, and are making money. With the exception of Bessemer pig and soft steel manufacturers, profits have been very little above the average, excepting in the Southern States. The Southern iron makers have been particularly fortunate in obtaining remunerative prices for all the iron they have sold. Their margins have ranged from \$2 to \$4 per ton, though perhaps the latter figure includes some items which should go to cost of production. Our private advices from several large iron-producing concerns in the South all agree upon the one point—that Southern iron making is being and will be attended with wider margins than have heretofore prevailed. The increased use of Southern irons has established their reputation for uniformity and good quality. The Southern local demand is becoming a most important feature. Quotations for Southern irons for next summer deliveries have not been made excepting in a few cases. Now that freight rates to Ohio river points are fixed, buyers and sellers can enter upon negotiations with confidence, and we learn that within a day or two active negotiations have just set in for very large blocks for summer and fall delivery. Considerable iron still awaits the pleasure of railway companies for transportation facilities, and several large makers have been assured within a few days that irregular service in that respect is about at an end. Among the rumors recently started concerning new iron-making plants in the South, are two or three which indicate that four or five new furnaces, not yet made public, will be built in Northern Alabama.

Advices from all Northern iron centers show that the holidays have passed without the development of much new business. Since last Wednesday very little has been reported, but brokers and representatives of large buyers are on the alert. The possibility of the setting in of a general demand is contemplated in all markets. There will be a very active movement in Lake ores throughout the year. Sales of Bessemer ore to date foot up nearly 5,500,000 tons. Nearly all the Lake tonnage has been engaged for the season. Ten large vessels are to be added to the tonnage of the lakes, and contracts for 5,000 tons of steel plates were placed last week with Carnegie, Phipps & Co., at Pittsburgh. Other boat building contracts are likely to be heard of very soon. The rapid devel-

opment of lake tonnage has not been equal to the growing demands, and the attention of capitalists is being directed to the opportunities for good investments in more fully supplying the demands. Preparations are being made for the opening and development of quite a number of new ore mills. Bessemer pig has advanced to \$25 and \$25.50 at Cleveland; \$24.50 to \$25 at Pittsburgh; \$24 to \$25 at Chicago. Bessemer furnaces are all oversold; the demand for steel blooms, billets and slabs promises to develop to unusual proportions during the winter. Everything depends upon the energy with which promoters of new enterprises push their schemes. There is no reason for believing that they will hold back. A mere enumeration of new and large schemes which will call for iron and steel would go to show that the iron trade will undoubtedly be called upon to meet a most extraordinary demand. There are possibilities standing in the way that may check enterprise. A stringent money market is one. Financial authorities do not speak with satisfactory clearness upon financial probabilities. As yet the industries have not suffered from any scarcity of money. Another element of uncertainty which may affect demand and the pushing of new enterprises is the fluctuation of prices. Coal, ore, labor, freights, and, in addition to these, a general enhancement of values would all go to make builders and promoters move more cautiously. There have been large sales of ferro-manganese within the past month. Representatives of manufacturers of blooms and slabs have informed new buyers that they are not in position to make fresh promises for future deliveries at present.

The bar, plate and sheet mills enter upon the new year with very satisfactory promises of new business. The nail factories East and West enter the year with abundant orders and with prices under their control. Building will be resumed upon a large scale, and besides this, car, ship and boat building will call for a great deal of material. Another source of additional demand will be the requirements of railroad builders, but the magnitude of this demand is yet a matter of guesswork. Steel rails are \$35 in Eastern markets. Old rails are \$28. Bridge building material is very strong. Ship plate is active at 2.25 for iron.

### Notice.

JANUARY 1ST, 1890.

TO THE HARDWARE TRADE.—It has been decided that all sash pulleys made by the Palmer Hardware Manufacturing Co., except the "Common Sense" pulley, are infringements on the rights of the Empire Portable Forge Co., and that all sash pulleys made by the Empire Portable Forge Co., except the "Empire" pulley, are infringements on the rights of the Palmer Hardware Manufacturing Co.; therefore, all pulleys for auger-made mortises except the "Common Sense" and "Empire" sash pulleys are withdrawn from the market from this date.

We hereby notify the trade that from this date all suits between us are discontinued, and the "Common Sense" and "Empire" sash pulleys will be sold at strictly uniform prices and terms, and we solicit your orders for either or both of them.

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Lansingburgh, N. Y.

"54° 40' or fight." See "War" Robertson's adv. in this paper, page 58.

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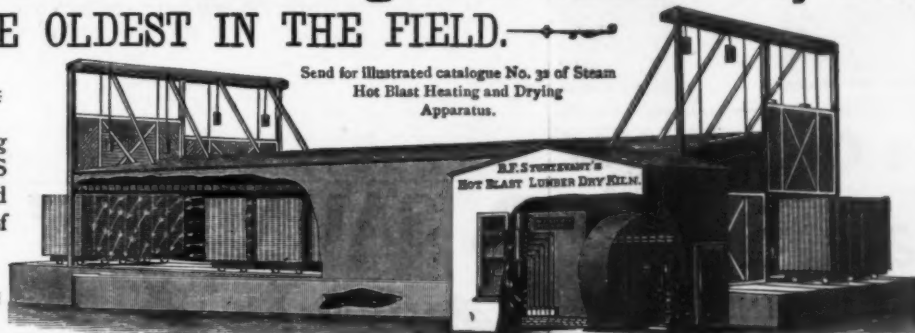
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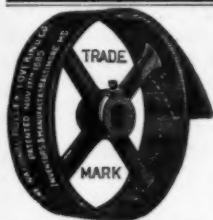
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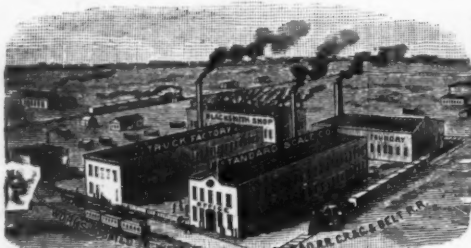
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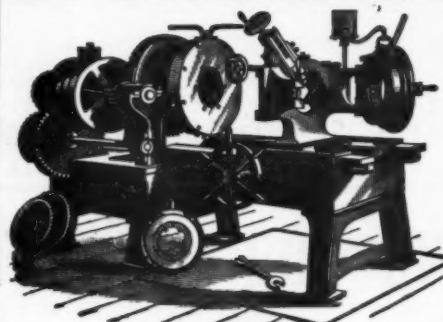
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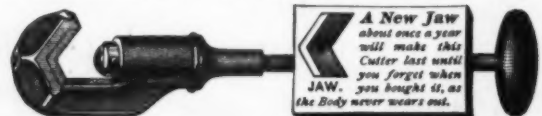


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## Eastern Lumber Markets.

[Spec. corresp'dence MANUFACTURERS' RECORD.]  
NEW YORK, January 7, 1890.

The lumber sales in this city and vicinity for the past year, when figured, will show very little difference from the sales of 1888. They will show smaller sales of white pine, and larger sales of Southern lumber. The percentage of decrease and increase cannot be given at present. The open winter acts both favorably and unfavorably on the lumber business. The hardwoods sell more freely, and the soft woods more slowly. The past week's business has been light. The making of contracts for the year is engaging the attention of quite a number of wholesalers and large buyers. The representatives of Western manufacturers are beginning to return from their holiday visit home. The mills hereabouts are running to their fullest capacity. The export business to South America for the past week foots up about 1,500,000 feet. We all count upon a good and busy year and steady prices. White pine uppers are selling at \$43 to \$45; selects, one inch, \$42; fine common, one inch, \$36 to \$38; cutting up, one inch, \$28 to \$30; common \$23; box boards \$15; shelving \$30; moulding \$36. West India shipments of white pine \$17. Quotations for North Carolina rough pine, kiln dried, one-inch stock, \$21; for dressed No. 1 flooring \$22.50; for No. 2 flooring \$19; No. 3 \$17. Quotations for yellow pine for common sidings \$13 to 14; flooring \$21.50; stepping \$26 to \$28; heart-faced boards \$20.50; random orders \$21. Quotations on hemlock joist \$12; boards \$12.50. It is not likely that these figures will be broken into during the winter, and manufacturers can rely upon obtaining about these prices for stocks that will stand the usual inspection. There are a variety of quotations which would be given for different kinds of lumber, but dealers who know what specific stocks they have to sell can always give more exact quotations. A large business is being done in both Georgia and North Carolina pine—the latter, of course, taking the lead. Dealers are naturally hopeful that the prices for the coming year will afford them a little wider margin, but as things are going and likely to go, margins will be no better. The wonder to many is that where there is such an enormous distribution of lumber as takes place in New York week by week, prices are not better; but it must be kept in mind that lumber is being thrown into this market from all parts of the country.

The heavier demand for Southern woods has been followed by an advance in prices, and this advance has been followed by what we may term a little carelessness as to the quality of lumber shipped. When lumber is scarce people are not so particular, and for two or three months past there has been a relative scarcity of North Carolina inside stuff, particularly flooring and ceiling. Our news from Albany this week is that the trade has buttoned itself up to the chin for the winter; from Buffalo, that the idle tonnage is tied up waiting for the freeze-up; from Boston, that there is a heavy supply of lumber of all kinds, and that the demand for inside finishing stuff is good; from Chicago, that there is a considerable accumulation of lumber in that market, which points to easy prices during the year.

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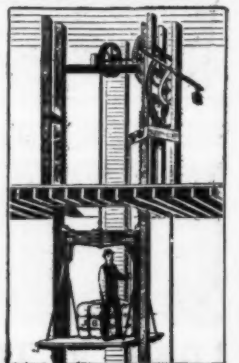


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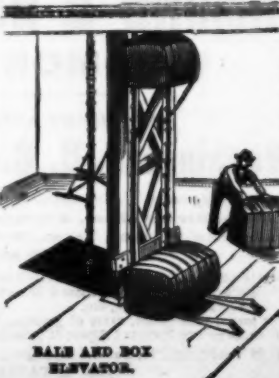
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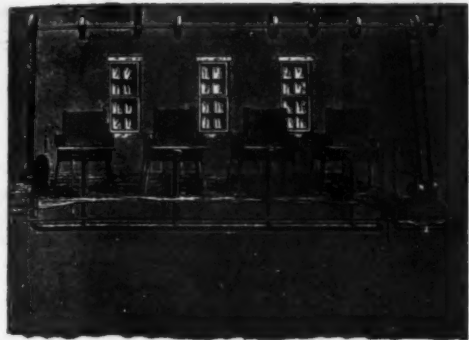
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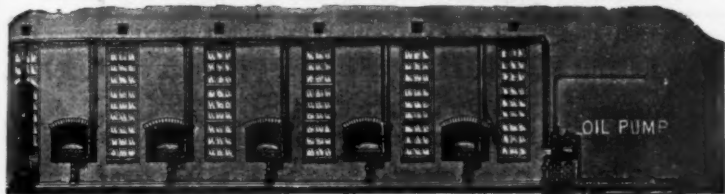
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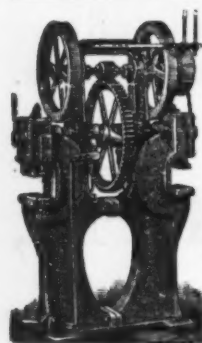
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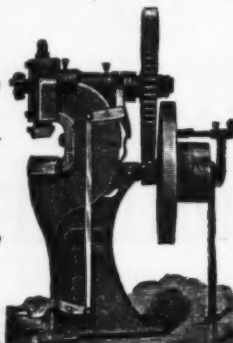
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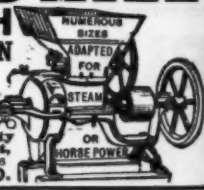
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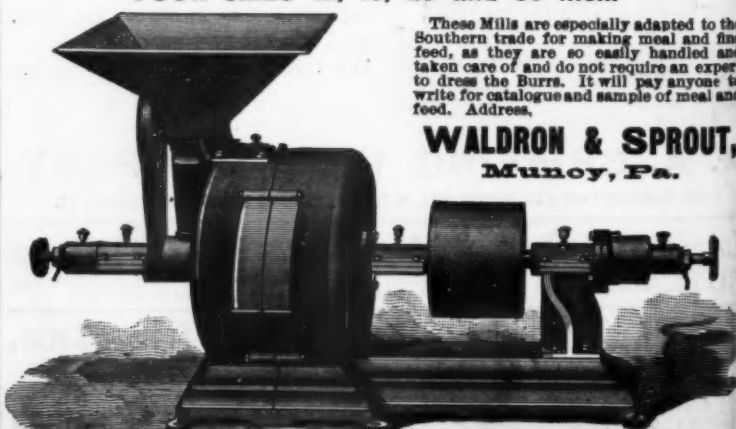
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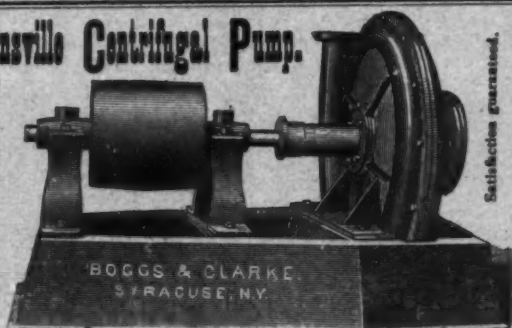
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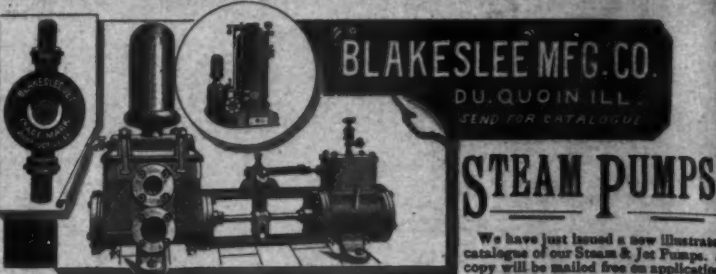
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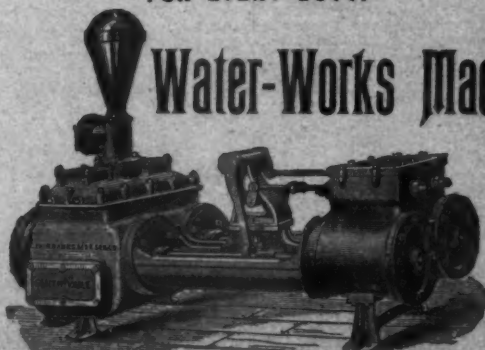
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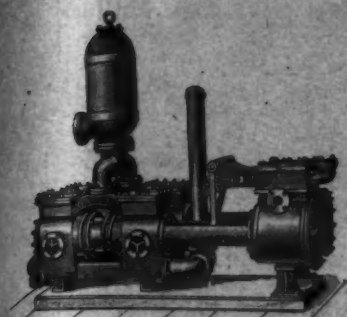
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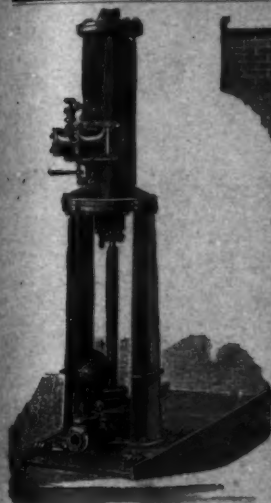
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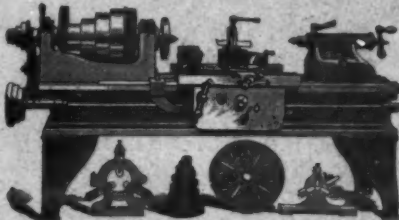
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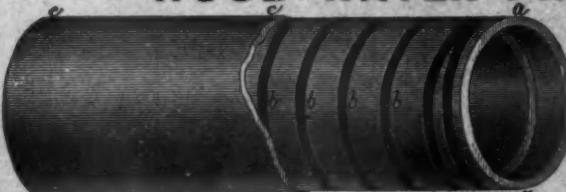


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